United States
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Agriculture

Economics
and Statistics
Service

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March 1981

Dairy

OUTLOOK & SITUATION

CURRENT SITUATION CHARTS

U.S. Milk Production by Months

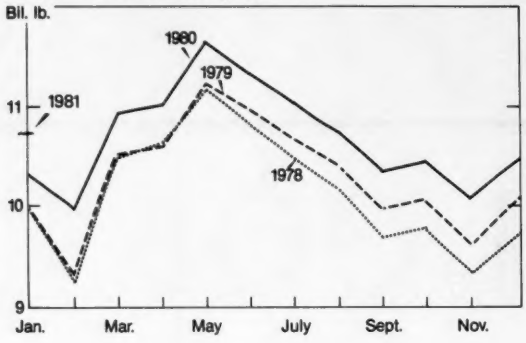
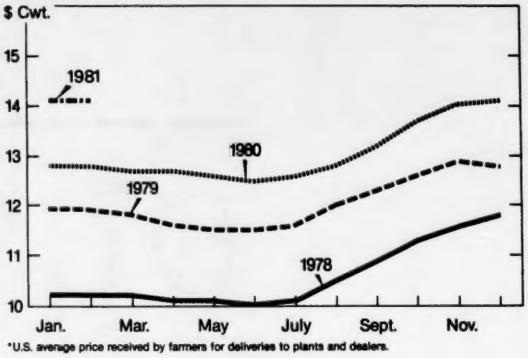


Figure 1

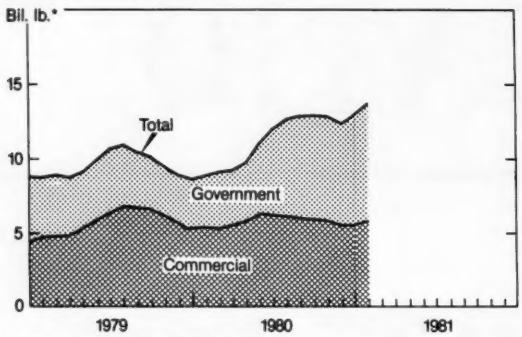
Milk Prices*



*U.S. average price received by farmers for deliveries to plants and dealers.

Figure 2

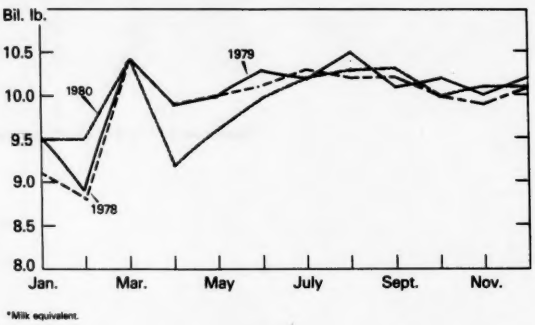
Dairy Product Stocks°



*As of first of month. *Milk equivalent, fat-solids basis.

Figure 3

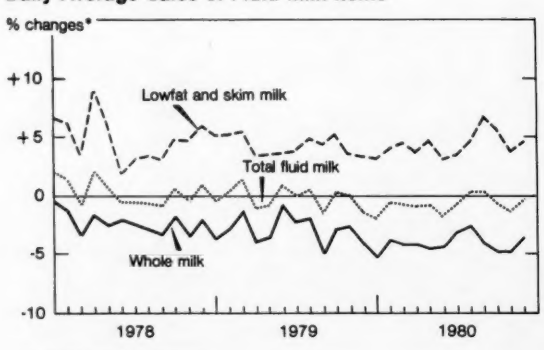
Commercial Disappearance of Milk in All Products*



*Milk equivalent.

Figure 4

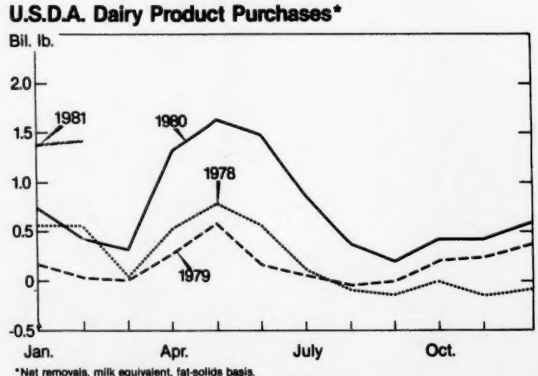
Daily Average Sales of Fluid Milk Items



From year earlier, adjusted for calendar composition.

Figure 5

U.S.D.A. Dairy Product Purchases*



*Net removals, milk equivalent, fat-solids basis.
^Negative figures denote domestic sales exceeded purchases.

Figure 6

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Summary

Milk production will show substantial gains during first-half 1981. The expanded output, along with adequate commercial dairy product stocks, will keep wholesale dairy prices near USDA purchase price levels. Under current law, the support price is scheduled to increase on April 1. This increase would cause wholesale prices to rise during April-May to near the higher purchase prices. USDA purchases will continue to be greater than a year ago. Farm and retail milk prices during first-half 1981 are expected to continue about a tenth above a year earlier.

Production in second-half of 1981 is likely to be about 2 percent above a year earlier, but commercial use should increase because of expected rises in consumer income and meat prices. Thus, with some seasonal price strength at the wholesale level, the rate of USDA purchases should moderate by late summer; farm and retail prices may also rise later in the year.

The production outlook during the first-half is well defined, but several key variables will determine cow numbers and output per cow in the second half. Among them are feed prices, beef prices, weather conditions, culling rates, and dairy support legislation.

On January 1, 1981, dairy replacements (500 pounds and over) totaled 4.4 million head, the largest number since 1966 and about 4-1/2 percent more than last year. With 10.87 million milk cows on farms January 1, there were 40 replacements for every 100 cows, the largest ratio ever for that date. With more milk cows and more output per cow, milk production will continue to expand through most of 1981 and may be up 2 to 3 percent for the year.

Milk production in 1980 totaled 128.4 billion pounds, the largest annual production on record, and 4.1 percent above 1979's 123.4 billion pounds (3.8 percent after adjustments for leap year). The increase was the result of a 3.4-percent gain in output per cow and an 0.7-percent rise in milk cows numbers. All five major milk-producing States posted production gains in 1980, California having the largest—8 percent.

The national average price of manufacturing grade milk failed to reach the announced support price in

February. It has been below support since April 1980. After adjustment for fat content, the February price was 34 cents below the established October 1 support level ($13.10 per 100 pounds of milk with 3.67 percent fat, or $12.80 with 3.5 percent fat). For 1980, the average price of manufacturing grade milk was $12.06 per 100 pounds—up 8.6 percent from 1979, but still 33 cents short of the simple average of 1980 support prices.

The April 1 support price increase (if there is one) will have little effect during first-half 1981 on the all-milk price. It will likely be up about a tenth from a year ago. For the rest of 1981, all-milk prices will depend on the April 1 and October 1 support levels and supply and demand for the year. At present, the all-milk price is expected to average 10 to 12 percent higher in 1981.

Cash receipts from dairying totaled $16.4 billion in 1980, up about 12 percent from 1979. Given milk price and production ranges, cash receipts could be up 10 to 15 percent in 1981. However, with prices paid by farmers for production items increasing faster than milk prices, dairy farmers' net income could deteriorate somewhat in 1981.

The combined effects of large commercial stocks, weak consumer use, and expanded production have kept wholesale dairy product prices nearly unchanged from late November through February. Unlike last year, wholesale prices will probably not rise in March even though an April 1 adjustment in support is presently required. Legislation has been introduced to delete the April 1 adjustment. If the legislation is enacted, the adequate commercial dairy stocks, heavy production, and continuing lackluster sales will hold prices near present levels. Otherwise, wholesale prices will rise to the higher purchase prices, with per pound increases of about 10 cents for butter, 5-1/2 cents for nonfat dry milk, and 9 cents for cheese. Retail dairy prices are currently expected to rise 10 to 12 percent in 1981, in part because of the April 1 support increase.

Production of manufactured dairy products (milk equivalent, fat-solids basis) was up about 8.2 percent in 1980 and used about 5.4 billion pounds more milk than in 1979. Meanwhile, commercial use of milk and dairy products was down 0.8 percent. With little change in commercial stocks, USDA last year purchased the equivalent of 8.8 billion pounds of milk—more than four times as much as in 1979. In 1981, since milk production is expected to continue rising faster than demand, USDA purchases will remain heavy. As a result, USDA stocks will continue to build, with midyear stocks likely to reach 15 billion pounds milk equivalent, compared with 6.5 billion a year earlier.

Dairy product imports during 1980 totaled 2.1 billion pounds milk equivalent, down 8.6 percent from 1979. Cheese imports accounted for about 1.9 billion pounds of the total. Imported dairy products comprised about 1.8 percent of all commercial use.

Cow's milk production for the world's 35 major dairy countries this year is expected to be up about 1 percent. The 1980 output of 388.8 million metric tons was also up 1 percent from 1979 levels. Worldwide butter production in 1981 may decline slightly, and consumption is likely to be down 1 to 2 percent, so stocks will probably grow 5 to 6 percent. Cheese production will likely increase 2 to 3 percent this year. Total nonfat dry milk output will probably continue to rise in 1981, increasing 2 to 3 percent.

All data series in this issue reflect the 1975 to 1980 milk production revisions but do not reflect the 1980 Census revisions.

Dairy Situation

PRODUCTION

Milk production presently continues well above year-earlier levels, as the number of milk cows and output per cow both remain higher than a year ago. December and January production levels were up 4.1 and 4.2 percent, respectively. January represented the 21st consecutive month of year-to-year gains in output. Milk cows during December and January averaged 10.873 million head, about 1 percent (103,000) more than a year ago, with January's level the highest since January 1978. Meanwhile, output per cow during December-January was up 3.2 percent from the same period a year ago, in contrast with a 2.4 percent year-over-year average gain during the July-August 1980 heat wave.

In the 5 major milk-producing States, December and January production was up substantially in Minnesota (7.0 percent), Pennsylvania (6.1 percent), and California (5.1 percent), and up modestly in Wisconsin (3.7 percent) and New York (3.1 percent). Of the 33 reporting States, 31 had gains in milk output during December-January, as 13 posted increases of 5 percent or more. Output was up in all 10 of the farm production regions, with the largest gain in the Mountain area—up 7.5 percent. The Pacific region led the primary production regions with a gain of 4.7 percent, while output was up about 4 percent in the Lake States, Northeast, and Corn Belt.

1980 In Review

Total 1980 milk production was 128.4 billion pounds, a 4.1-percent increase from 1979's 123.4 billion pounds (or a 3.8 percent gain after adjustment for leap year). It was the largest annual production on record (table 5). A strong gain in output per cow and the first increase in cow numbers since the mid-1950's led to the expansion. All months of 1980 saw a strong expansion in milk production, with monthly year-to-year increases ranging from 3.3 percent in July to 4.7 percent in November (table 1).

Milk per cow in 1980 increased an average of 3.4 percent, with January's 3.7 percent the largest year-to-year gain, and July's expansion of 2.3 percent the smallest. Several factors may account for the continued and substantial gains in output per cow. Milk-feed price relationships remained relatively advantageous through most of 1980, and dairy farmers increased their rate of concentrate ration feeding by an average of 4 percent during the year. In addition, the large number of replacement heifers that came into production during 1978 and 1979 approached their full productivity in 1980. Also, weather and pasture conditions promoted high milk output during late summer and early fall in the important Lake States region.

The U.S. dairy herd, which had declined since 1954, reached a low in June 1979. After increasing from June to September 1979, the herd remained nearly unchanged until April 1980. For the rest of 1980, the herd expanded. The switch from decline to increase was because of a reduced culling rate and a large number of replacements entering the herd. Culling was lower because dairying was more profitable than other farm enterprises and off-farm employment opportunities were fewer. The replacements numbers were large because the favorable milk-feed price ratio from second-half 1977 through 1978 resulted in a relatively large number of dairy calves being retained during late 1977 and all of 1978.

All 5 of the major milk-producing States expanded output during 1980, with California leading at 8.0 percent. Production was up 5.1 percent in Pennsylvania, 4.3 percent in Minnesota, 3.1 percent in New York, and 2.1 percent in Wisconsin. The combined gain of these 5 States accounted for nearly half of the total U.S. expansion in production. Output in 1980 declined or held steady relative to 1979 in only 10 States. Production increases last year occurred in all 10 regions, ranging from 8.9 percent in the Mountain area to 0.2 percent in the Delta States (table 2 and table 4). The 4 primary production regions were led by a 7.3 percent gain in the Pacific, followed by the Corn Belt at 3.7 percent, the Northeast at 3.5 percent, and the Lake States at 2.7 percent.

Replacement Heifer Inventory Higher

On January 1, 1981, dairy heifers (500 pounds and over) held for herd replacement totaled 4.4 million head, the largest stock of dairy replacements since 1966 and about 4-1/2 percent more than last year's large replacement herd (figure 7). On January 1 there were 40 heifers per 100 cows in the U.S. dairy herd, the largest ratio ever for that date, although down somewhat from the figure of 40-1/2 heifers per 100 dairy cows posted on July 1, 1980. Thus, a relatively large number of replacements will be available to enter the milk herd, and together with changes in culling rates will affect the overall size of the dairy herd in 1981.

The January 1 cattle inventory revealed that there were 10.87 million milk cows on farms, compared with 10.78 million a year earlier. This 0.8 percent increase (90,000 head) was the first time since 1954 that January 1 cow numbers were above a year-earlier.

Milk-Feed Ratio Lower

Since last summer, feed ingredient prices have strengthen in response to deteriorating crop prospects and tigher supply-demand conditions. Those higher prices continue to be reflected in higher dairy feed prices. The average price of 16-percent protein dairy ration in mid-February was $201 per ton, up $38 (23.3 percent) from

Table 1--Milk production, milk per cow, and milk cows on farms, by months, 1974-80, with comparisons

Item	1974	1975	1976	1977	1978	1979	1980 1/	Change from year earlier: 1979	Change from year earlier: 1980
	Million pounds							Percent	
Milk production 2/:									
January	9,335	9,358	9,597	9,888	9,958	9,960	10,307	+0.7	+3.5
February	8,763	8,773	9,289	9,285	9,242	9,281	9,970	0	+7.4
March	9,989	9,999	10,285	10,579	10,491	10,534	10,946	-.4	+3.9
April	10,124	10,116	10,475	10,732	10,610	10,603	11,013	-.1	+3.9
May	10,869	10,787	11,107	11,358	11,151	11,243	11,664	+.8	+3.7
June	10,615	10,445	10,786	10,968	10,817	10,948	11,321	+1.2	+3.4
July	10,171	9,975	10,435	10,671	10,503	10,683	11,036	+1.7	+3.3
August	9,711	9,544	10,117	10,362	10,182	10,409	10,782	+2.2	+3.6
September	9,137	9,050	9,590	9,810	9,683	9,987	10,364	+3.1	+3.8
October	9,100	9,162	9,603	9,824	9,780	10,063	10,455	+2.9	+3.9
November	8,663	8,832	9,210	9,380	9,320	9,623	10,076	+3.3	+4.7
December	9,109	9,357	9,686	9,797	9,724	10,077	10,491	+3.6	+4.1
Total 3/	115,586	115,398	120,180	122,654	121,461	123,411	128,425	+1.6	+4.1
	Pounds							Percent	
Milk per cow 2/									
January	828	835	867	899	915	923	957	+0.9	+3.7
February	778	783	840	845	851	862	926	+1.3	+7.4
March	888	894	931	964	968	981	1,016	+1.3	+3.6
April	901	905	949	979	982	989	1,022	+.7	+3.3
May	968	966	1,007	1,037	1,034	1,049	1,081	+1.5	+3.1
June	946	937	978	1,003	1,005	1,023	1,048	+1.8	+2.4
July	907	896	946	976	975	997	1,020	+2.3	+2.3
August	866	858	918	948	945	971	995	+2.8	+2.5
September	814	815	870	897	897	929	955	+3.6	+2.8
October	812	826	872	900	906	936	963	+3.3	+2.9
November	773	798	836	860	864	895	927	+3.6	+3.6
December	812	845	880	899	901	935	965	+3.8	+3.2
Total	10,293	10,360	10,894	11,206	11,243	11,488	11,875	+2.2	+3.4
	Thousands							Percent	
Milk cows on farms 4/									
January	11,279	11,206	11,074	10,995	10,887	10,792	10,768	-0.9	-0.2
February	11,261	11,200	11,061	10,983	10,860	10,763	10,771	-.9	+.1
March	11,254	11,185	11,046	10,971	10,834	10,742	10,772	-.8	+.3
April	11,240	11,179	11,042	10,962	10,801	10,721	10,772	-.7	+.5
May	11,225	11,161	11,028	10,953	10,783	10,717	10,792	-.6	+.7
June	11,216	11,147	11,023	10,938	10,768	10,706	10,800	-.6	+.9
July	11,215	11,135	11,027	10,937	10,768	10,710	10,815	-.5	+1.0
August	11,219	11,119	11,026	10,936	10,779	10,722	10,838	-.5	+1.1
September	11,220	11,099	11,017	10,938	10,790	10,751	10,849	-.4	+.9
October	11,213	11,090	11,016	10,913	10,793	10,754	10,861	-.4	+1.0
November	11,209	11,073	11,013	10,910	10,788	10,755	10,868	-.3	+1.1
December	11,215	11,074	11,003	10,899	10,792	10,772	10,872	-.2	+.9
Annual average	11,230	11,139	11,032	10,945	10,803	10,743	10,815	-.6	+.7

1/ Preliminary.
2/ Excludes milk sucked by calves.
3/ May not add due to rounding.
4/ Excludes heifers not yet fresh.

Table 2—Milk cow numbers, milk per cow, and changes by production regions, 1980

Production regions	Milk cow numbers[1]	Milk per cow	1980 Change from year earlier: Milk cow numbers[1]	Milk per cow	Milk production
	1,000 hd	*Pounds*		*Percent*	
Northeast	2,171	12,040	+0.8	+2.7	+3.5
Lake States	3,072	11,980	+0.6	+2.1	+2.7
Corn Belt	1,446	11,095	+0.6	+3.2	+3.7
Northern Plains	496	10,577	0	+4.7	+4.6
Appalachian	799	10,563	-0.7	+4.2	+3.4
Southeast	433	10,467	-1.8	+3.4	+1.5
Delta States	*293*	*8,754*	*-3.3*	*+3.6*	*+ .2*
Southern Plains	428	11,042	+1.7	+4.5	+6.3
Mountain	477	12,763	+4.4	+4.4	+8.9
Pacific	*1,192*	*14,835*	*+2.6*	*+4.6*	*+7.3*
United States[2]	[3]10,815	[3]11,875	+0.7	+3.4	+4.1

[1]Average number during the year.
[2]Includes Alaska and Hawaii.
[3]May not add to totals due to rounding.

last year, although prices were unchanged from mid-November. With milk prices also nearly unchanged since mid-November the milk-feed price ratio has held steady at 1.40 (figure 8). However, milk-feed price relationships in early 1981 were down about 10 percent from a year ago.

In early March No. 2 yellow corn at Chicago stood at $3.45 per bushel, or about 85 cents above a year ago but 15 cents below mid-December. The market price of corn is expected to increase from present levels, but will likely be sensitive to demand changes, this spring's planting weather, and crop prospects over the summer. This sensitivity is due to the corn supply being substantially reduced and disappearance expected to increase, leaving carryover stocks by late September probably at about 570 million bushels, a reduction of about 1 billion bushels from a year earlier.

Soybean supply was also reduced substantially because of a poor harvest; thus, carryover stocks are expected to decline from last year. Therefore, the market price will likely average above last year but it may be volatile, depending upon the Southern Hemisphere crop outcome as well as prospects for U.S. production. The soybean meal supply is expected to be down and meal prices will likely increase from present levels. In early March, 44-percent protein soymeal (Decatur) was quoted at $200 per ton, up about $30 from a year ago. With both corn and soybean meal prices expected to increase, costs of dairy concentrate ration can also be expected to increase until this year's feed crops are harvested.

Hay stocks on January 1 were estimated at 92 million tons, 15 percent below last year and the lowest since 1977. Hay prices remain above last year but will likely weaken as demand declines with the approach of spring grazing. The mid-February average price received by farmers for baled alfalfa was $77.50 per ton, up 16.4 percent ($11) from last year. Prices ranged from $42 per ton in Michigan to $130 in Texas.

Production Expansion to Continue

Milk cow numbers can be expected to remain above year-earlier levels for most of this year and for all of 1981 to average about 1/2 percent above 1980. The January 1 cattle inventory revealed that there were more replacements for each 100 milk cows than a year ago. Thus even with a normal culling rate the present dairy herd can be maintained or even expanded. In addition, because the support price is currently scheduled to increase on April 1, some dairy farmers may consider the milk receipts potential of their marginal cows high enough to offset higher production expenses and so may continue a low culling rate until later this year. However, the expected increase in utility cow prices later this year and current high feed prices that are expected to strengthen could together limit further gains in cow numbers.

On the prospects for milk per cow, the current milk-feed price relationships are less favorable than in 1980 and will likely limit increased concentrate feeding and thus limit gains in output per cow. However, if current culling rates pick up, there will be some improvement in the average productivity potential as the marginal cows are removed from the herd. In addition, the improved genetics of the dairy herd will also moderate the effect of lower concentrate feeding. As a result, output per cow will likely increase in 1981. On balance, milk production gains can be expected during most of 1981 with total milk output for the year up 2 to 3 percent over the record 128.4 billion pounds in 1980.

Fewer Dairy Operations

During 1980, the total number of operations with milk cows declined by 14,700 to 335,270—a drop of 4 percent.

Milk cows and replacements, 1975-81

Date	Milk cows	Replacement heifers 500 pounds and over: Number	per 100 cows
	1,000	*Number*	
January 1	11,220	4,087	36.4
July	11,148	3,924	35.2
1976			
January 1	11,071	3,956	35.7
July 1	11,023	3,948	35.8
1977			
January 1	10,998	3,887	35.3
July 1	10,946	4,004	36.6
1978			
January 1	10,896	3,886	35.7
July 1	10,761	3,955	36.8
1979			
January 1	10,790	3,932	36.4
July 1	10,700	4,115	38.4
1980			
January 1	10,779	4,158	38.6
July 1	10,804	4,378	40.5
1981			
January 1	10,869	4,353	40.0

Table 3--Milk: Production by production regions, 1974-78 1/

State and region	1974	1975	1976	1977	1978
	Million pounds				
Maine	611	629	628	638	641
New Hampshire	329	336	335	339	341
Vermont	1,945	2,009	2,093	2,100	2,136
Massachusetts	593	601	598	597	572
Rhode Island	63	63	60	57	55
Connecticut	613	608	616	624	614
New York	9,822	9,964	10,198	10,224	10,408
New Jersey	551	528	545	549	525
Pennsylvania	6,980	7,140	7,507	7,791	7,881
Delaware	128	127	135	139	129
Maryland	1,505	1,550	1,549	1,575	1,540
NORTHEAST	23,140	23,555	24,264	24,633	24,842
Michigan	4,350	4,411	4,620	4,761	4,793
Wisconsin	18,713	18,900	20,296	21,041	21,252
Minnesota	9,382	8,946	9,239	9,483	9,089
LAKE STATES	32,445	32,257	34,155	35,285	35,134
Ohio	4,221	4,259	4,435	4,455	4,275
Indiana	2,260	2,210	2,240	2,248	2,178
Illinois	2,522	2,446	2,485	2,515	2,399
Iowa	4,025	3,893	3,954	4,030	3,960
Missouri	2,989	2,840	2,919	2,918	2,719
CORN BELT	16,017	15,648	16,033	16,166	15,531
North Dakota	980	917	948	954	903
South Dakota	1,642	1,556	1,650	1,652	1,540
Nebraska	1,477	1,431	1,409	1,344	1,269
Kansas	1,403	1,392	1,447	1,442	1,372
NORTHERN PLAINS	5,502	5,296	5,454	5,392	5,084
Virginia	1,705	1,755	1,877	1,894	1,873
West Virginia	350	350	356	350	345
North Carolina	1,462	1,498	1,580	1,583	1,544
Kentucky	2,370	2,319	2,383	2,426	2,274
Tennessee	1,971	2,031	2,096	2,181	2,073
APPALACHIAN	7,858	7,953	8,292	8,434	8,109
South Carolina	515	512	525	525	513
Georgia	1,190	1,221	1,303	1,301	1,308
Florida	1,875	1,956	2,023	1,993	1,972
Alabama	708	686	682	684	631
SOUTHEAST	4,288	4,375	4,533	4,503	4,424
Mississippi	907	876	862	858	836
Arkansas	706	707	710	725	729
Louisiana	1,059	1,054	1,088	1,089	1,063
DELTA STATES	2,672	2,637	2,660	2,672	2,628
Oklahoma	1,137	1,060	1,102	1,120	1,090
Texas	3,380	3,208	3,309	3,372	3,433
SOUTHERN PLAINS	4,517	4,268	4,411	4,492	4,523
Montana	294	278	275	296	306
Idaho	1,555	1,555	1,554	1,600	1,633
Wyoming	123	110	113	124	120
Colorado	866	845	835	848	872
New Mexico	338	366	405	426	458
Arizona	810	840	882	914	906
Utah	925	919	924	936	940
Nevada	167	168	191	198	187
MOUNTAIN	5,078	5,081	5,179	5,342	5,422
Washington	2,312	2,322	2,428	2,549	2,675
Oregon	1,004	990	1,024	1,052	1,065
California	10,596	10,853	11,583	11,968	11,859
PACIFIC	13,912	14,165	15,035	15,569	15,599
Alaska	18	17	16	16	15
Hawaii	139	146	148	150	150
UNITED STATES	115,586	115,398	120,180	122,654	121,461

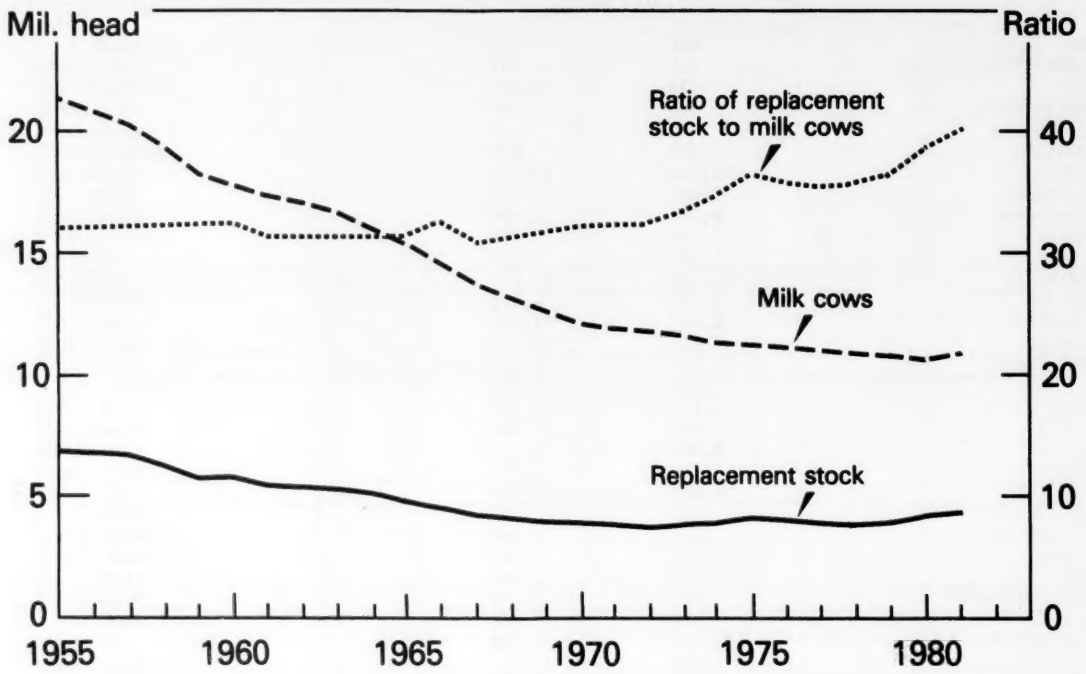
1/ Final Estimates, 1975-78

Table 4--Milk: Production by production regions, 1979 and 1980, with comparisons

State and region	1979	1980 1/	1980	
			As percent of U.S. total	Change from year earlier
	Million pounds		Percent	
Maine	641	673	0.5	+5.0
New Hampshire	341	349	.3	+2.3
Vermont	2,179	2,294	1.8	+5.3
Massachusetts	566	565	.4	-0.2
Rhode Island	50	47	2/	-6.0
Connecticut	606	617	.5	+1.8
New York	10,630	10,956	8.5	+3.1
New Jersey	494	491	.4	-0.6
Pennsylvania	8,084	8,496	6.6	+5.1
Delaware	127	125	.1	-1.6
Maryland	1,520	1,520	1.2	0
NORTHEAST	25,238	26,133	20.3	+3.5
Michigan	4,830	4,970	3.9	+2.9
Wisconsin	21,850	22,298	17.4	+2.1
Minnesota	9,145	9,535	7.4	+4.3
LAKE STATES	35,825	36,803	28.7	+2.7
Ohio	4,265	4,310	3.4	+1.1
Indiana	2,175	2,210	1.7	+1.6
Illinois	2,391	2,540	2.0	+6.2
Iowa	3,920	4,108	3.2	+4.8
Missouri	2,714	2,876	2.2	+6.0
CORN BELT	15,465	16,044	12.5	+3.7
North Dakota	874	907	.7	+3.8
South Dakota	1,549	1,669	1.3	+7.7
Nebraska	1,260	1,315	1.0	+4.4
Kansas	1,330	1,355	1.1	+1.9
NORTHERN PLAINS	5,013	5,246	4.1	+4.6
Virginia	1,937	1,999	1.6	+3.2
West Virginia	350	350	.3	0
North Carolina	1,565	1,631	1.3	+4.2
Kentucky	2,220	2,219	1.7	0
Tennessee	2,091	2,241	1.7	+7.2
APPALACHIAN	8,163	8,440	6.6	+3.4
South Carolina	524	537	.4	+2.5
Georgia	1,338	1,367	1.1	+2.2
Florida	1,996	2,028	1.6	+1.6
Alabama	606	600	.5	-1.0
SOUTHEAST	4,464	4,532	3.5	+1.5
Mississippi	814	817	.6	+0.4
Arkansas	725	745	.6	+2.8
Louisiana	1,022	1,003	.8	-1.9
DELTA STATES	2,561	2,565	2.0	+0.2
Oklahoma	1,070	1,110	.9	+3.7
Texas	3,377	3,616	2.8	+7.1
SOUTHERN PLAINS	4,447	4,726	3.7	+6.3
Montana	297	309	.2	+4.0
Idaho	1,721	1,934	1.5	+12.4
Wyoming	119	132	.1	+10.9
Colorado	857	858	.7	+0.1
New Mexico	507	586	.5	+15.6
Arizona	941	1,023	.8	+8.7
Utah	948	1,027	.8	+8.3
Nevada	199	219	.2	+10.1
MOUNTAIN	5,589	6,088	4.7	+8.9
Washington	2,817	2,942	2.3	+4.4
Oregon	1,103	1,169	.9	+6.0
California	12,563	13,572	10.6	+8.0
PACIFIC	16,483	17,683	13.8	+7.3
Alaska	13	13	2/	0
Hawaii	150	152	.1	+1.3
UNITED STATES	123,411	128,425	100.0	+4.1

1/ Preliminary. 2/ Less than 0.05 percent.

Milk Cows and Replacement Stock*



*January inventory of milk cows and dairy heifers over 500 pounds.

USDA Figure 7 Neg. ESS 1008-80(3)

This compares with a 6-percent decline in the number of operations in 1978 and a 5-percent decline in 1979. Wisconsin and Minnesota retained the largest number of dairy operations in 1980, with 45,000 and 26,000 respectively. In the 5 major milk-producing States, the number of operations declined 2,600 (2.2 percent), and accounted for less than a fifth of the total U.S. decline.

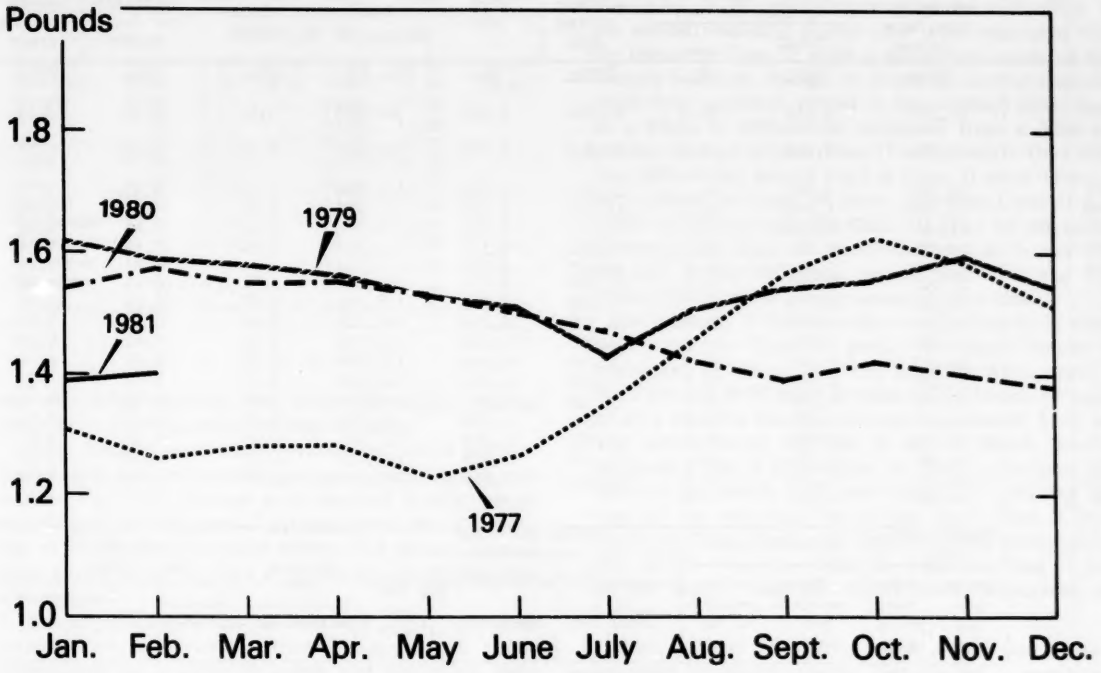
In 1980, larger dairy operations continued to increase in relation to the total number of dairy farms; dairy farms with 50 or more milk cows accounted for 20.4 percent of all dairy operations, compared with 18.6 in 1979. In 1979, the herds of 50 or larger held 61.9 percent of the dairy cow inventory, but in 1980 the share was up to 63.6 percent. Farms with herds of 100 cows or more accounted for only 5.4 percent of all operations in 1980 but held a third of the U.S. dairy herd. In contrast, the dairy farms with less than 30 cows were 60.7 percent of all operations but accounted for only 13.5 percent of the cow inventory. As in 1979, California in 1980 had the largest proportion of dairy operations with herds of 100 cows or more—31 percent. In 1980, seven other States reported that 10 percent or more of their total dairy farms had 100 or more milk cows, compared with four States in 1979. In 1981 the trend toward larger, but fewer dairy farms will likely continue.

Milk-feed price ratio[1]

Month	1979	1980	1981
		Pounds	
January	1.62	1.54	1.39
February	1.59	1.57	1.40
March	1.58	1.55	
April	1.56	1.55	
May	1.53	1.53	
June	1.51	1.50	
July	1.43	1.47	
August	1.51	1.42	
September	1.54	1.39	
October	1.55	1.42	
November	1.59	1.40	
December	1.55	1.38	
Average	1.55	1.48	

[1]Pounds of 16% protein ration equal in value to 1 pound of milk.

Milk-Feed Price Ratio*



*Pounds of 16% protein ration equal in value to one pound of milk sold to plants and dealers.

USDA Figure 8 Neg. ESS 40-81(3)

PRICES AND INCOME

In recent months the national average price of manufacturing grade milk continued below support but remained above year-earlier levels. After adjusting for fat content, December and January were both 31 cents below $13.10 per 100 pounds of milk—the established October 1 support level at 3.67 percent fat. (The support level is $12.80 for 3.5 percent fat.) The February price was 34 cents below support, but 10.3 percent above a year earlier. The shortfall from support since April continues to reflect the large milk supply and the resulting reduced competition among manufacturers for raw milk. For 1980 the simple average of prices received by dairy farmers for manufacturing grade milk was $12.06—up 8.6 percent from 1979, but 33 cents short of the simple average of support prices in effect for 1980.

For April, minimium Class I Federal order prices will average $14.76 per cwt., up 2 cents from March and 5 cents above February. Meanwhile, a number of cooperative associations announced increases in their negotiated Class I prices during January, but generally held these prices during February. As a result, the estimated average over-order payment in Federal order markets increased from 56 cents per cwt. during December to 67 cents in January, but then dropped to 61 cents in February. From August 1979 through February 1981, the aver-

Utility cow prices, Omaha

	Dollars per cwt.		
January	47.33	47.94	41.61
February	50.81	51.22	43.65
March	52.94	48.80	
April	57.00	45.73	
May	55.51	42.78	
June	50.60	44.06	
July	47.80	43.33	
August	48.33	45.53	
September	49.65	46.56	
October	47.71	45.93	
November	46.98	42.92	
Average	50.10	45.73	

Table 5--Milk production and factors affecting supply, United States, selected years, 1955-81

Year	Milk cattle on farms, January 1 1/			Milk cows on farms, average during year	Milk production		Average prices received by farmers per 100 pounds		
	Milk cows and heifers that have calved	Milk cow replacements; heifers 500 pounds and over			Per cow	Total	All milk, wholesale	Milk eligible for fluid market	Milk, manufacturing grade
		Total	Per 100 cows						
	Thou.	Thou.	No.	Thou.	Lb.	Mil. lb.	Dol.	Dol.	Dol.
1955	21,320	6,832	32.0	21,044	5,842	122,945	4.01	4.50	3.15
1960	17,650	5,686	32.2	17,515	7,029	123,109	4.21	4.69	3.25
1965	15,380	4,780	31.1	14,953	8,305	124,180	4.23	4.63	3.34
1966	14,490	4,450	30.7	14,071	8,522	119,912	4.81	5.17	3.97
1967	13,725	4,215	30.7	13,415	8,851	118,732	5.02	5.43	4.06
1968	13,115	4,080	31.1	12,832	9,135	117,225	5.24	5.67	4.22
1969	12,550	3,990	31.8	12,307	9,434	116,108	5.49	5.87	4.45
1970	12,091	3,880	32.1	12,000	9,751	117,007	5.71	6.05	4.70
1971	11,909	3,843	32.3	11,839	10,015	118,566	5.87	6.19	4.86
1972	11,776	3,828	32.5	11,700	10,259	120,025	6.07	6.38	5.08
1973	11,622	3,872	33.3	11,413	10,119	115,491	7.14	7.42	6.20
1974	11,297	3,941	34.9	11,230	10,293	115,586	8.33	8.66	7.13
1975	11,220	4,087	36.4	11,139	10,360	115,398	8.75	9.02	7.63
1976	11,071	3,956	35.7	11,032	10,894	120,180	9.66	9.93	8.56
1977	10,998	3,887	35.3	10,945	11,206	122,654	9.72	9.96	8.70
1978	10,896	3,886	35.7	10,803	11,243	121,461	10.60	10.80	9.65
1979	10,790	3,932	36.4	10,743	11,488	123,411	12.00	12.20	11.10
1980	10,779	4,158	38.6	10,815	11,875	128,425	13.04	13.22	12.06
1981 2/	10,869	4,353	40.0						

Year	Dairy ration cost		Milk cow cost		Grain and other concentrates fed to milk cows 3/			Dairy pasture feed conditions as percent of normal	Alfalfa hay prices	
	Value per 100 pounds	Milk-feed price ratio 4/	Price received per head	Milk required to buy a cow	Total fed	Per cow	Per 100 pounds of milk produced		Received by farmers per ton	Paid by farmers per ton
	Dol.	Lb.	Dol.	Cwt.	Thou. tons	Lb.	Lb.	Pct.	Dol.	Dol.
1955	3.16		146	36	18,664	1,758	30.1	77	22.00	33.70
1960	2.92		223	53	19,821	2,259	32.2	82	21.00	31.60
1961	2.92		224	53	20,916	2,404	33.2	84	21.00	30.90
1962	2.95		221	54	21,617	2,533	34.3	80	21.40	30.60
1963	3.04		215	52	21,858	2,646	35.1	73	23.50	32.90
1964	3.03		209	50	22,464	2,800	35.9	73	24.00	32.60
1965	3.03	1.18	212	50	22,827	2,953	36.7	80	25.00	33.00
1966	3.15	1.30	246	51	22,569	3,000	37.6	78	24.70	33.40
1967	3.23	1.35	260	52	22,790	3,374	38.3	80	23.60	34.08
1968	3.10	1.47	274	52	22,886	3,519	39.1	83	23.00	32.94
1969	3.15	1.54	300	55	23,615	3,726	40.7	82	23.90	34.08
1970	3.28	1.53	332	58	24,870	3,979	42.4	81	24.70	34.69
1971	3.44	1.49	358	61	25,107	4,070	42.4	79	27.10	37.57
1972	3.52	1.52	397	65	25,162	4,298	41.9	80	31.45	40.15
1973	4.88	1.28	496	69	25,042	4,389	43.4	83	41.55	51.65
1974	6.23	1.22	500	60	24,586	4,384	42.6	75	52.58	63.58
1975	6.25	1.31	412	47	24,274	4,357	42.1	79	54.38	66.18
1976	6.30	1.37	477	49	25,083	4,545	41.7	70	60.81	72.16
1977	6.20	1.39	504	52	25,518	4,709	42.1	72	60.57	74.25
1978	6.08	1.53	675	64	26,082	4,806	42.8	76	52.25	5/
1979	6.68	1.54	1,040	87	---	---	---	82	60.67	5/
1980 2/	7.18	1.48	1,185	91	---	---	---	71	72.48	5/

1/ Prior to 1965, estimated by Livestock Section, ERS.
2/ Preliminary.
3/ On farms where milk or cream was sold. Beginning 1966, data are for all farms where milk was produced.
4/ Pounds of 16 percent protein ration equal in value to 1 pound of milk.
5/ Discontinued series.

Milk prices received by farmers

Month	All sold to plants			Manufacturing grade		
	1979	1980	1981	1979	1980	1981
	Dollars per 100 pounds					
January	11.90	12.80	14.10	10.90	11.80	13.00
February	11.90	12.80	14.10	10.80	11.70	12.90
March	11.80	12.70		10.80	11.80	
April	11.60	12.70		10.80	11.80	
May	11.50	12.60		10.80	11.70	
June	11.50	12.50		10.70	11.70	
July	11.60	12.60		10.80	11.60	
August	12.00	12.80		11.10	11.80	
September	12.30	13.20		11.40	12.20	
October	12.60	13.70		11.60	12.70	
November	12.90	14.00		11.70	12.90	
December	12.80	14.10		11.70	13.00	
Average	12.00	13.04		11.10	12.06	

age over-order payment was relatively stable, ranging from 56 to 72 cents and averaging 63 cents.

Dairy farmers received an average of $14.10 per cwt. for all-milk sold during February, up a tenth from a year earlier. The $13.04 average price received by dairy people for all-milk in 1980 was 8.7 percent above the 1979 average of $12.00. This contrasts with a 13.2 percent average gain posted in 1979, when a tighter supply-demand balance existed.

The all-milk price during first-half 1981 will likely average 10 percent above a year ago because of higher manufacturing grade milk prices and the effect these have through the Minnesota-Wisconsin (M-W) on the minimum Federal order class I prices. For the rest of 1981, all-milk prices will be a function of the April support increase (if there is one), the support level on October 1, and supply and demand for the year. Although present law requires the support price to be increased about 7 percent on April 1, Congress is considering legislation that would forego the increase. At present, with the April support estimated at $14.00 for 3.67-percent-fat milk and the October support assumed to be 75 percent of parity (the minimum level required by the Agriculture Act of 1949), the all-milk price for 1980 is expected to average 10 to 12 percent higher.

Class II Price Announcement Decision

USDA has recommended amending the Class II price announcement procedure in 29 Federal order markets which had adopted uniform classification provisions in 1974. Class II in the orders includes milk used in producing mainly milk and cream mixtures, cream products, frozen desserts, cottage cheese, and yogurt. The recommended procedure is based on evidence presented at a public hearing last August. This hearing and a subsequent interim procedure for announcing Class II prices in the 29 orders were necessitated by an order of the U.S. Court of Appeals for the District of Columbia, which ruled that the existing Class II announcement was invalid.

Under the recommended procedure, the Class II price for the month would be announced on a tentative basis by the 15th of the preceding month. This Class II price for the particular month would be the Minnesota-Wisconsin (M-W) manufacturing grade milk price for the second preceding month (the latest available when the tentative Class II price is announced), updated by a formula based on changes in prices of selected manufactured dairy products. Added to this updated price would be a Class II differential computed from a 12-month moving average of past Class II differentials. Over time, this differential should yield a Class II price about 10 cents above the Class III price. The final Class II price would not be less than the Class III price for the month. However, this Class III price would not be known until the 5th of the following month; therefore, the final Class II price would be announced at that time.

For example, if this procedure was currently in effect, the tentative Class II price for April would be announced on March 15. This price for April would be the February M-W price (announced on March 5) updated by a formula based on changes in selected dairy product prices during the first 15 days of March, plus the computed Class II differential. In effect, a tentative estimate of the March M-W price would be made and then used in the determination of the April Class II price. The final Class II price for April would be announced on May 5 and would be either the tentative Class II price or the April Class III (M-W) price, whichever was higher.

Until a final decision is made on the issue and is approved by producers, the Department is announcing Class II prices for these 29 orders under an interim procedure. The Class II price for April, for example, was announced at $12.90 per cwt. This price was announced on March 5 and was based on an estimated M-W price for April of $12.80.

Cash Receipts $16.4 Billion in 1980

Compared with a year ago, farm cash receipts from the dairy enterprise were up about 13.2 percent during November-December because marketings were about 4 percent larger and milk prices about 9 percent higher. For the year, total cash receipts were estimated at $16.4 billion, up from $14.7 billion in 1979. Given the milk production and milk price ranges for 1981, total cash receipts will likely be up 10 to 15 percent from last year.

During December-February, the index of prices paid for production items by all farmers increased 10.7 percent from a year earlier. Meanwhile, prices received for all-milk during the December-February period were up 10.2 percent. With prices paid by farmers increasing faster than milk prices, and with the cost of 16-percent dairy concentrate ration expected to increase, net income for dairy farmers could deteriorate somewhat in 1981.

Wholesale Prices Steady

The combined effects of large commercial stocks, weak consumer use, and expanded milk production have maintained downward pressure on wholesale dairy prices.

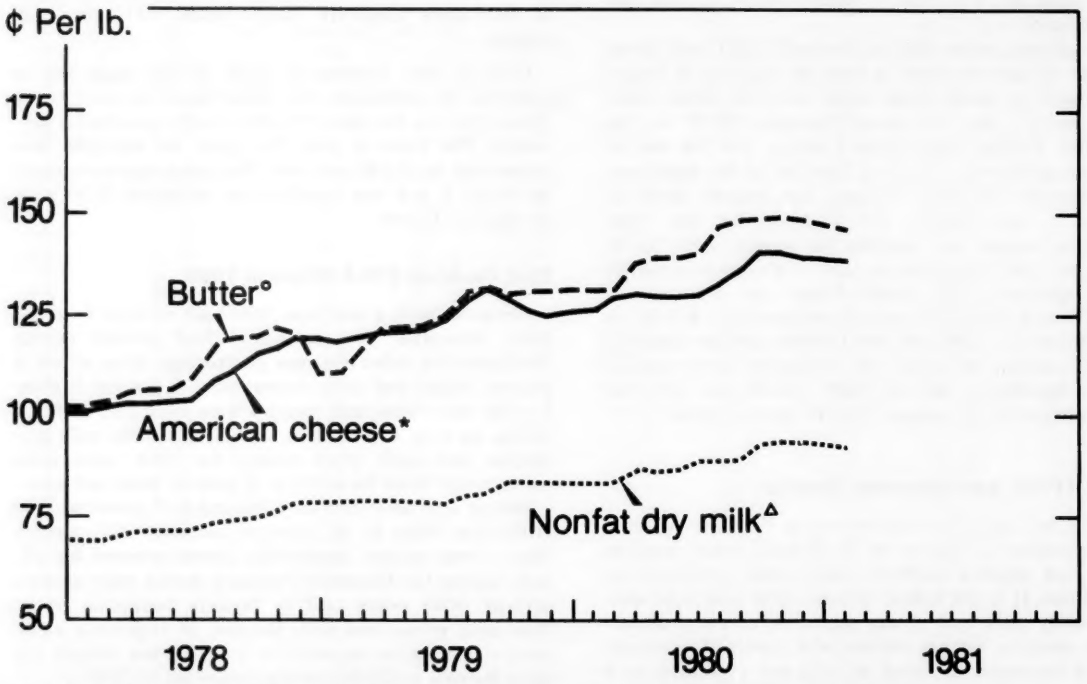
Thus, prices in wholesale dairy markets from late November through February have remained nearly unchanged and slightly below support purchase prices.

Wholesale prices of butter, nonfat dry milk, and cheddar cheese probably will rise very little in March, even though an April 1 upward adjustment in support is presently required. Usually, prices increase in anticipation of such an increase. However, legislation has been introduced to delete the requirement that the support price of milk be adjusted on April 1. If the legislation were enacted, the Secretary of Agriculture would not be required to make the April 1 price adjustment. Until the picture becomes clearer as to what might happen on April 1, little or no price adjustment will occur. In addition, with no April adjustment, more than adequate commercial dairy stocks, the flush production period started, and continuing lackluster sales of dairy products, wholesale prices can be expected to remain at or near support purchase levels.

If the April 1 adjustment does occur, it will probably increase the support level about 90 cents from the current $13.10 per 100 pounds for 3.67 percent fat milk ($12.80 per cwt. for 3.5 percent fat milk). In order to achieve the higher support price (assuming no change in the milk) the purchase price of butter would be raised about 10 cents above the current level of $1.49 cents per pound. Meanwhile, the nonfat dry milk price, currently 94 cents per pound, would increase 5-1/2 cents. Likewise, the cheese purchase price would need to be raised nearly 9 cents from the present purchase price of $1.395 cents per pound.

At the end of February, Chicago Grade A butter prices were quoted at $1.47-1/4 cents per pound, down 1 cent from late November (figure 9). For all of 1980 the Chicago Grade A butter price averaged about $1.39-1/3 cents per pound, up 13.8 percent from 1979. Since late November, the price of nonfat dry milk (high heat, Central States area) has held nearly unchanged—down 1/4 cent. In 1980 the manufacturers' average selling price of nonfat dry milk averaged 88-2/3 cents per pound, up 10.8 percent from the previous year. With respect to American cheese, 40-pound blocks of cheddar were priced at

Wholesale Dairy Product Prices



°Grade AA Chicago. *40-lb. block, Wisconsin assembly points. △High-heat, central-states.

USDA Figure 9 Neg. ESS 79-81(3)

$1.39-1/4 per pound at the end of February, down 1-1/2 cents since late November. During 1980, the 40-pound block price averaged about $1.33 cents per pound, up 7.5 percent from 1979. In general, wholesale prices of butter, cheese, and nonfat dry milk in 1980 increased when the purchase prices increased on April 1 and October 1. For 1981, wholesale prices will move up in April if the higher support is made effective. Otherwise, wholesale prices will likely remain near present levels until after the flush milk production period.

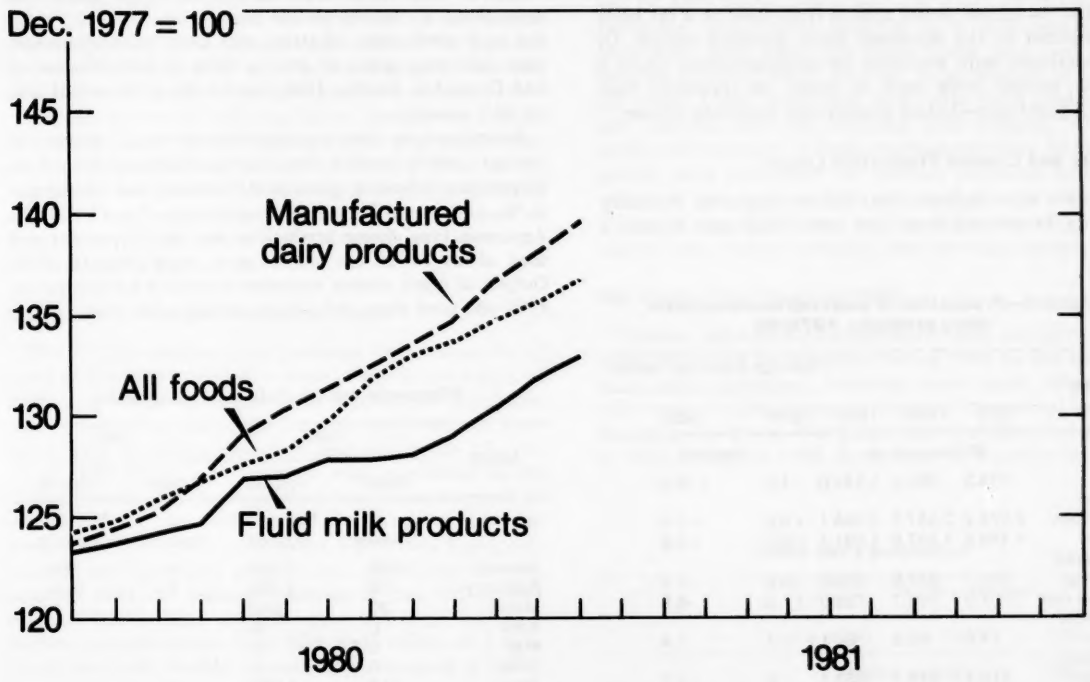
The February wholesale dairy product index, as reported by the Bureau of Labor Statistics (BLS), was 245.5 (1967 = 100), up 11.2 percent from a year ago. Year-over-year increases in the index have picked up in recent months, reflecting the different price movements in 1979 and 1980. In early 1979, wholesale prices were substantially above support. However, as milk production expanded in second-half 1979, the amount by which prices exceeded support declined even though prices increased. Then, during second-half 1980, with prices at support, the rate of increase in prices picked up as they followed the support increases. For all of 1980, wholesale dairy prices increased an average of 9.2 percent from 1979.

Retail Prices Up 9.8 Percent in 1980

The BLS retail dairy products index for January was 240.1 (1967 = 100), up about a tenth from a year ago (figure 10). During 1980 retail dairy products averaged 9.8 percent above 1979. In contrast, the all-food retail index in 1980 was up an average of 8.6 percent, and the overall Consumer Price Index for all goods and services rose 13.5 percent.

The increased value of milk at the farm and higher marketing costs contributed about equally to the higher retail prices in 1980. The dairy farmers' share of the consumers' dollar spent for dairy products decreased slightly to 52-1/2 cents in 1980, down from 53 cents in 1979. For 1981, retail dairy prices are expected to continue rising, probably averaging 10 to 12 percent higher. Meanwhile, retail prices for all foods in 1981 are expected to be 10 to 15 percent higher.

Retail Food and Dairy Product Prices



USDA

Figure 10

Neg. ESS 38-81(3)

BLS is now publishing a set of a selected average retail prices for individual food products in leading cities by months. The data start in January 1980 and at present do not link with the history of retail prices for individual products that was compiled until June 1978. Six items are reported by BLS under 'dairy products'—fortified fresh whole milk (1/2-gallon), fresh skim milk (1/2-gallon), fresh low fat milk (1/2-gallon), grade AA butter (1 pound), prepackage regular ice cream (1/2-gallon), and fruit-flavored yogurt (1/2-pint). The price reported in January 1981 for a half-gallon of whole milk was $1.10-2/5, up 8 percent from January a year ago. For 1980 the average price was $1.04-9/10. Retail prices for butter averaged $1.99-2/5 per pound in January, up 10.5 percent from January 1980. The average retail butter price in 1980 was $1.87-4/5. Ice cream averaged $1.82-3/10 per half-gallon in 1980 and was 10.4 percent higher in January 1981. Yogurt per half-pint increased 9.4 percent from January 1980 and averaged 46.9 cents for the year.

Retail dairy product prices

Item	Index base	Year 1979	Jan 1980	Year 1980	Jan 1981
Consumer Price index[1]	1967=100	217.4	233.2	246.8	260.5
All food	1967=100	234.5	243.8	254.6	268.6
All dairy products[1]	1967=100	207.1	218.4	227.4	240.1
Fluid milk and cream	12/77=100	116.8	123.2	127.0	133.0
Whole milk	1967=100	191.4	202.3	208.4	218.2
Other	12/77=100	116.4	122.1	126.3	132.1
Manufactured dairy products	12/77=100	117.4	123.8	130.6	139.6
Butter	1967=100	202.9	216.9	228.0	242.7
Cheese	12/77=100	117.7	123.5	129.5	138.2
Frozen desserts	12/77=100	117.0	124.0	132.8	143.6
Other	12/77=100	114.0	119.8	126.4	133.3

[1]For all urban consumers starting January 1978.

UTILIZATION

Production of manufactured dairy products in 1980, on a milk equivalent, fat-solids basis, was up about 8.2 percent and used about 5.4 billion pounds more milk than in 1979. The 5.0 billion pound increase in milk production and the 0.4 billion pound drop in fluid sales on a fat basis contributed to the increased dairy products output. Of the increased milk available for manufacturing, about 5 billion pounds were used to make the products that USDA purchases—butter-powder and American cheese.

Butter and Cheese Production Larger

Weekly data indicate that butter output in February was up 14 percent from last year. That gain follows a January butter output up 17 percent from last year, after being up 21 percent in December and 12 percent in November (table 6). For all of 1980, butter production was 1,142 million pounds, 16 percent larger than and, used about 3.1 billion pounds more milk. January nonfat dry milk production, likewise, was 23 percent above last year following gains of over a fifth in both November and December. During 1980, nonfat dry milk output was up 26.7 percent.

American-type cheese production was up 17 percent in January, while weekly data showed February output up 15 percent, following gains of 9.8 percent and 14 percent in November and December, respectively. For all of 1980, American type cheese production was up 7.6 percent and used about 1.8 billion pounds more milk than in 1979. Output of other cheese varieties increased 4.2 percent in 1980 and used about 0.4 billion pounds more milk.

Table 6—Production of selected manufactured dairy products, 1978-80

Item	1978	1979	1980[1]	Change from year earlier 1979	Change from year earlier 1980
	Million pounds				*Percent*
Butter	994.3	984.6	1,142.0	-1.0	+16.0
Cheese					
American	2,074.2	2,187.7	2,354.1	+5.5	+7.6
Other	1,445.5	1,527.6	1,591.4	+5.7	+4.2
Creamed cottage	870.5	837.8	828.0	-3.8	-1.2
Canned milk	787.9	796.1	725.0	+1.0	-8.9
Dry whole milk	74.6	85.3	84.1	+14.3	-1.4
Ice cream (mil gal.)	815.4	811.1	833.3	-.5	+2.7
Milk equivalent[2]	65,944	67,484	72,900	+2.3	+8.0
Nonfat dry milk	920.4	908.1	1151.0	-1.3	+26.7

[1]Preliminary.
[2]Total all manufactured products.

Wisconsin out-of-state milk shipments

Month	1980 Loads	1980 Volume	1981 Loads	1981 Volume
	Number	Thousand pounds	Number	Thousand pounds
January	156	7,332	4	188
February	70	3,290	7	329
March	20	940		
April	0	0		
May	0	0		
June	0	0		
July	119	5,593		
August	146	6,862		
September	190	8,930		
October	67	3,149		
November	8	376		
December	6	282		
Total	782	36,754		

With milk supplies for manufacturing purposes likely to remain heavy, output of butter-powder and American cheese during the next 4 to 6 months will continue showing year-to-year gains similar to recent months.

Commercial Disappearance Down

Commercial use of milk and dairy products during 1980 was down 0.8 percent from 1979 (on a milkfat equivalent basis). However, the story of 1980 is best illustrated by the quarterly patterns (table 7). First-quarter use was up nearly 2 percent, but after adjustment for the extra day in February, use was up only 0.7 percent. Use in the third quarter was up 0.4 percent, while the fourth quarter was down 0.4 percent. Thus, almost all of the 1980 drop in commercial use can be attributed to the second quarter's decline of 4.8 percent. This lackluster 1980 performance, particularly in the second quarter was primarily caused by the weak general economy, higher retail dairy product prices, and relatively favorable meat prices.

Turning to the product side, commercial butter use during fourth-quarter 1980 was down 3 percent (table 8). Butter use for the year was down over 2 percent. Commercial disappearance of American cheese during 1980 was down over 4 percent; each quarter posted a decline. This contrasts with an average annual gain of 5.2 percent during the past decade. Meanwhile, sales of other-than-American cheese were up 12 percent in the fourth quarter, pulling 1980 sales to more than 4-1/2 percent above 1979. Fluid sales on a product weight basis for 1980 were slightly below a year ago—down 0.8 percent.

Commercial use of milk and dairy products on a milk equivalent basis should increase this year from last year's depressed levels because increasing meat prices and higher consumer incomes will make dairy products relatively more attractive. However, further increases in retail dairy product prices and a sluggish general economy will tend to limit gains.

USDA Dairy Product Purchases Larger

The USDA continued to purchase large amounts of dairy products this winter because of the heavy supply of milk and weak demand. Milk equivalent purchases totaled 2.9 billion pounds in January and February, compared with 1.1 billion pounds a year ago (table 13). For all of 1980, USDA net removals were equivalent to 8.8 billion pounds of milk, more than four times as much as in 1979. Since 1981 milk production is expected to rise faster than dairy product demand, USDA will likely continue to purchase dairy products at a record rate through most of 1981. In addition, because of the 105 percent sell-back policy, high interest rates, and large milk production manufacturers may hold their stocks at a relatively low level, thereby increasing the amount of USDA removals during flush.

USDA Dairy Product Stocks Large

Commercial stocks, on a milk equivalent, fat-solids basis, started 1980 above a year earlier (table 12). But because of high carrying charges, the seasonal expansion of commercial holdings during the flush production period was smaller than normal. By June, industry stocks were below year-ago levels and remained below until December, when they were up about 2 percent. Meanwhile, government stocks started 1980 below 1979, but by April moved above year-ago levels. By the end of December, government holdings on a milk equivalent basis were more than two times larger than last year, because program usage was not large enough to offset the larger USDA purchases. Now, with flush production just starting and the economy still sluggish, USDA stocks will continue to build, perhaps reaching 15 billion pounds milk equivalent by midyear compared with 6.5 billion a year earlier. After midyear the drawdown in USDA stocks will depend on the sell-back policy, commercial use relative to supply, and carrying charges.

Changes in dairy sales from year earlier

Item	1979	1980
	Percent	
Total milk[1]	+1.1	-0.8
Manufactured products:		
American cheese	+2.2	-4.1
Other cheese	+4.5	+4.6
Cottage cheese[2]	-2.9	+0.8
Butter	-0.9	-2.2
Ice cream	-0.5	+2.7
Ice milk	-4.3	-2.2
Canned milk	-0.3	-5.3
Nonfat dry milk	-8.4	-12.3
Fluid products	-0.1	-0.8
Whole milk	-2.7	-4.1
Skim and lowfat milk	+4.4	+4.4
Cream and mixtures	+1.4	[3]+1.5

[1]On a milk equivalent, fat-solids basis.
[2]Creamed and low-fat.
[3]Estimated

Per Capita Use Down In 1980

Civilian per capita consumption of milk and dairy products decreased by 5 pounds during 1980 to 554 pounds on a milk equivalent, fat-solids basis (table 10). Even with larger USDA donations, reduced commercial use set the stage for a loss. Per person use of milkfat decreased to 20.5 pounds in 1980, down from 20.6 pounds in 1979

USDA dairy purchases[1]

Item	January-February		
	1980	1981	Change
	Million pounds		*Percent*
Butter	37.1	100.9	+172.0
American cheese	40.1	75.4	+88.0
Nonfat dry milk	66.9	116.1	+73.5
Evaporated milk	2.6	3.6	+38.5
Milk equivalent	1,167	2,836	+143.0

[1]Deliveries minus unrestricted sales.

Table 7 --Commercial disappearance: Total milk, annual and by quarters, 1974-80 1/

Item	Production	Farm use	Marketings	Beginning commercial stocks	Imports	Total supply	Ending commercial stocks	Net removals	Commercial disappearance: actual	Percent changes 2/
	Billion pounds									--Percent--
1974	115.6	3.2	112.4	4.7	2.9	120.0	5.6	1.3	113.1	+.5
1st	28.1	.8	27.3	4.7	1.4	33.4	5.3	.1	28.0	+4.1
2nd	31.6	.8	30.8	5.3	.4	36.5	7.8	.5	28.3	-3.5
3rd	29.0	.8	28.2	7.8	.4	36.4	7.2	.6	28.7	+1.5
4th	26.9	.8	26.1	7.2	.6	33.9	5.6	.2	28.1	+.3
1975	115.4	3.1	112.3	5.6	1.7	119.6	3.7	2.0	113.8	+.6
1st	28.1	.8	27.3	5.6	.3	33.2	5.0	1.1	27.1	-3.2
2nd	31.3	.8	30.5	5.0	.2	35.7	5.5	1.2	29.1	+2.9
3rd	28.6	.8	27.8	5.5	.4	33.7	4.7	4/ -.3	29.3	+2.2
4th	27.4	.8	26.6	4.7	.7	32.0	3.7	5/	28.3	+0.5
1976	120.2	3.0	117.2	3.7	1.9	122.9	5.3	1.2	116.3	+2.2
1st	29.2	.7	28.5	3.7	.4	32.6	4.2	5/	28.4	6/ +3.2
2nd	32.4	.7	31.7	4.2	.4	36.3	6.5	.1	29.6	+1.9
3rd	30.1	.7	29.4	6.5	.4	36.3	6.7	.1	29.6	+.9
4th	28.5	.7	27.8	6.7	.7	35.2	5.3	1.1	28.8	+1.8
1977	122.7	2.8	119.8	5.3	2.0	127.1	4.9	6.1	116.1	-.2
1st	29.8	.7	29.1	5.3	.5	34.9	5.5	2.1	27.2	-4.2
2nd	33.1	.7	32.4	5.5	.5	38.4	7.1	2.6	28.6	-3.6
3rd	30.8	.7	30.1	7.1	.4	37.6	6.0	1.1	30.5	+3.3
4th	29.0	.7	28.3	6.0	.7	35.0	4.9	.3	29.8	+3.6
1978	121.5	2.7	118.8	4.9	2.3	126.0	4.5	2.7	118.8	+2.3
1st	29.7	.7	29.0	4.9	.5	34.4	5.1	1.2	28.3	+4.0
2nd	32.6	.7	31.9	5.1	.4	37.4	5.6	1.9	29.9	+4.6
3rd	30.4	.7	29.7	5.6	.5	35.8	5.3	4/ -.1	30.6	+2.7
4th	28.8	.7	28.1	5.3	.9	34.3	4.5	4/ -.2	30.0	+6.9
1979	123.4	2.5	120.9	4.5	2.3	127.7	5.4	2.1	120.2	+1.1
1st	29.8	.6	29.2	4.5	.4	34.1	4.9	.2	28.8	+2.0
2nd	32.8	.6	32.2	4.9	.5	37.6	6.4	1.1	30.2	+.9
3rd	31.1	.6	30.5	6.4	.6	37.5	6.6	5/	30.8	+.5
4th	29.8	.6	29.2	6.6	.9	36.7	5.4	.8	30.4	+1.2
1980 3/	128.4	2.4	126.0	5.4	2.1	133.5	5.6	8.8	119.2	-0.8
1st	31.2	.6	30.6	5.4	.4	36.4	5.6	1.5	29.4	6/ +.7
2nd	34.0	.6	33.4	5.6	.4	39.4	6.2	4.4	28.7	-4.8
3rd	32.2	.6	31.6	6.2	.5	38.3	5.9	1.5	30.9	+.4
4th	31.0	.6	30.4	5.9	.9	37.2	5.6	1.4	30.3	-.4

1/ Milk equivalent, fat solids basis. Totals may not add due to rounding.
2/ From year earlier, using unrounded data.
3/ Preliminary.
4/ Domestic sales exceeded purchases.
5/ Less than 50,000 pounds.
6/ On a daily average basis.

Table 8 --Commercial disappearance: Selected dairy products, United States, annual 1970-80, quarters, 1979-80 1/

Year and quarter	Butter 2/	Cheese		Nonfat dry milk	Canned Milk	Frozen products 4/
		American 3/	Other			
	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. lb.	Mil. gal.
1970	898.2	1,398.0	909.1	983.2	1,213.8	1,097.3
1971	847.1	1,454.8	987.0	981.8	1,186.9	1,102.4
1972	885.4	1,595.7	1,127.8	919.2	1,102.6	1,108.6
1973	855.6	1,677.1	1,210.2	1,110.1	1,056.7	1,118.6
1974	929.9	1,780.6	1,276.5	809.9	999.5	1,128.0
1975	951.0	1,717.1	1,331.9	697.0	923.9	1,183.9
1976	919.0	1,920.9	1,458.0	719.2	899.0	1,154.0
1977	859.8	1,958.8	1,512.3	682.2	775.2	1,167.6
1978	903.5	2,064.7	1,655.5	658.4	776.1	1,173.5
1979	895.0	2,110.9	1,730.7	603.1	773.7	1,152.9
1980	875.0	2,024.5	1,810.9	529.2	732.8	1,167.1
1979 - 1st	248.3	515.2	384.8	166.3	198.8	250.5
2nd	203.0	541.6	428.8	117.2	162.3	323.6
3rd	202.1	510.0	440.4	197.3	185.9	339.4
4th	241.6	543.5	476.9	122.2	226.6	239.4
1980 - 1st	251.0	508.6	419.3	158.3	177.4	251.3
2nd	161.5	495.2	424.7	74.0	158.5	322.7
3rd	228.4	488.5	432.7	183.5	172.3	350.2
4th	234.3	531.9	534.3	113.3	224.7	245.1
	1979-80 percent change					
1st 5/	- .3	- 2.5	+ 7.9	- 6.4	-11.8	- .8
2nd	-20.4	- 8.6	- .9	-36.9	- 2.3	- .3
3rd	+13.0	- 4.2	- 1.7	- 7.0	- 7.3	+ 3.2
4th	- 3.0	- 2.1	+12.0	- 7.3	- .8	+ 2.4

1/ Totals may not add due to rounding. 2/ Imports include butter equivalent of butteroil. 3/ Imports include Colby cheese; stocks do not include processed cheese. 4/ Excludes Mellorine. 5/ On a daily average basis.

Table 9--Factors influencing and indicative of the demand for milk and dairy products, United States, selected years, 1960-80

Year	Total population July 1 (including Armed Forces overseas)	Total civilian employment	Per capita disposable income		Civilian per capita disappearance					Retail price indexes		
					Milk equivalent		Milk solids					
			Current R	Deflated by consumer price index 1/ R	Fat-solids basis	Calcium content basis	Milkfat	Solids-not-fat	Margarine	Consumer price	All foods	Dairy products
	--- Million ---		--- Dollars ---		---------- Pounds ----------					---- 1967=100 ----		
1960	180.7	65.8	1,947	2,195	653	512	24.5	41.4	9.4	88.7	88.0	88.4
1965	194.3	71.1	2,448	2,590	620	505	22.9	40.6	9.9	94.5	94.4	90.0
1966	196.6	72.9	2,613	2,688	604	503	22.3	40.3	10.5	97.2	99.1	95.8
1967	198.7	74.4	2,757	2,757	581	494	21.4	39.5	10.5	100.0	100.0	100.0
1968	200.7	75.9	2,956	2,837	577	499	21.2	39.7	10.8	104.2	103.6	103.3
1969	202.7	77.9	3,152	2,871	569	497	20.9	39.6	10.8	109.8	108.9	106.7
1970	204.9	78.6	3,393	2,917	562	486	20.6	39.8	11.0	116.3	114.9	111.8
1971	207.0	79.1	3,630	2,993	557	490	20.4	39.8	11.1	121.3	118.4	115.3
1972	208.8	81.7	3,879	3,096	561	479	20.6	39.6	11.3	125.3	123.5	117.1
1973	210.4	84.4	4,346	3,265	555	477	20.4	39.8	11.3	133.1	141.4	127.9
1974	211.9	85.9	4,710	3,189	544	471	20.0	38.2	11.3	147.7	161.7	151.9
1975	213.6	84.8	5,132	3,184	546	469	20.1	38.0	11.2	161.2	175.4	156.6
1976	215.2	87.5	5,550	3,255	548	486	20.1	38.7	12.2	170.5	180.8	169.3
1977	216.9	90.5	6,046	3,331	550	482	20.1	38.3	11.6	181.5	192.2	173.9
1978	218.7	94.4	6,688	3,423	555	445	20.4	38.0	11.5	195.4	211.4	185.6
1979	220.6	96.9	7,441	3,423	559	445	20.6	38.0	11.5	217.4	234.5	207.1
1980 2/	222.6	97.3	8,178	3,314	554	439	20.5	37.5	11.7	246.8	254.6	227.4

1/ 1967 dollars.
2/ Preliminary.
R = Revised series.

Table 10--Milk and dairy product sales (domestic disappearance, commercial sources), total and per capita, United States, 1974-80 1/

Year	Fluid milk product sales					Butter	Cheese			Evaporated and condensed	
	Fluid whole milk	Cream 2/	Low-fat milk 3/	Total product weight	Whole milk equivalent 4/		Whole and part skim milk 5/		Cottage cheese 6/	Whole milk	Skimmed milk
							American	Other			
	Total										
	Million pounds										
1974	38,358	1,143	14,815	54,316	50,514	917	1,771	1,267	992	1,154	732
1975	38,256	1,175	16,558	55,989	51,123	948	1,692	1,317	1,006	1,097	761
1976	37,061	1,189	17,710	55,960	51,502	932	1,912	1,446	1,025	1,046	783
1977	35,638	1,199	18,988	55,825	51,380	860	1,912	1,493	1,032	915	854
1978	34,938	1,214	19,813	55,965	51,175	894	2,050	1,627	1,039	885	772
1979	33,995	1,231	20,689	55,915	51,421	921	2,116	1,703	1,010	894	748
1980 7/	32,600	1,250	21,600	55,450	51,010	908	2,023	1,783	1,017	869	731
	Per capita 8/										
	Pounds										
1974	184	5.5	70.9	260	242	4.3	8.4	6.0	4.7	5.5	3.5
1975	181	5.6	78.5	266	243	4.4	8.0	6.2	4.7	5.1	3.6
1976	174	5.6	83.3	263	242	4.3	8.9	6.7	4.8	4.9	3.6
1977	166	5.6	88.4	260	240	4.0	8.8	6.9	4.8	4.2	3.9
1978	161	5.6	91.5	259	236	4.1	9.4	7.5	4.8	4.1	3.5
1979	156	5.6	94.6	256	235	4.2	9.6	7.7	4.6	4.1	3.4
1980 7/	148	5.7	97.8	251	231	4.1	9.1	8.0	4.6	3.9	3.3

Year	Frozen products					Dry products			
	Ice cream	Ice milk	Sherbet	Other	Mello-rine	Whole milk	Nonfat dry milk	Butter-milk	Whey 9/
	Total								
	Million pounds								
1974	3,753	1,629	325	56	166	15	839	44	453
1975	4,015	1,643	316	66	144	16	668	44	477
1976	3,928	1,574	322	64	112	33	743	38	527
1977	3,887	1,694	324	72	90	34	698	59	530
1978	3,914	1,705	312	77	78	56	640	50	543
1979	3,893	1,632	293	72	75	66	692	42	597
1980 7/	3,914	1,597	293	72	67	62	661	47	572
	Per capita 8/								
	Pounds								
1974	17.8	7.7	1.5	0.3	0.8	0.1	4.0	0.2	2.1
1975	18.8	7.7	1.5	.3	.7	.1	3.1	.2	2.2
1976	18.3	7.3	1.5	.3	.5	.2	3.5	.2	2.5
1977	18.0	7.8	1.5	.3	.4	.2	3.2	.3	2.5
1978	17.9	7.8	1.4	.4	.4	.3	2.9	.2	2.5
1979	17.7	7.4	1.3	.3	.3	.3	3.1	.2	2.7
1980 7/	17.6	7.2	1.3	.3	.3	.3	3.0	.2	2.6

1/ Excludes milk used on farms where produced and distribution from USDA supplies; includes sales to the Armed Services for use in the United States.

2/ Includes milk and cream mixtures.

3/ Includes skim milk, buttermilk, flavored milk drinks, and yogurt.

4/ Fat solids basis.

5/ Excludes cottage cheese.

6/ Includes full-skim American.

7/ Preliminary or estimated.

8/ Based on resident population, except fluid milk product sales--based on estimated population using fluid products from purchased sources.

9/ Includes modified whey products starting 1975.

Table 11 --Milk solids and selected dairy products: Supply and utilization, 1972-80

Year and item	Supply				Utilization					Ending stocks
					Foreign		Domestic			
	Beginning stocks	Production	Imports	Total supply	Exports	Shipments 1/	Military	Civilian	Total use 2/	
	Million pounds									
Milkfat										
1972	185	4,410	66	4,661	57	25	66	4,253	4,461	200
1973	200	4,225	150	4,575	24	24	46	4,235	4,388	187
1974	187	4,238	108	4,533	20	20	42	4,185	4,325	208
1975	208	4,240	65	4,513	19	19	39	4,241	4,376	137
1976	137	4,402	74	4,613	17	21	36	4,279	4,410	203
1977	203	4,481	75	4,759	16	21	35	4,314	4,442	317
1978	317	4,455	87	4,859	13	21	34	4,412	4,535	324
1979 3/	324	4,542	88	4,954	13	22	41	4,507	4,636	316
1980 3/	318	4,726	82	5,126	14	20	37	4,528	4,649	477
Solids-not-fat										
1972	200	10,334	67	10,601	332	53	94	8,173	10,439	162
1973	162	9,932	335	10,429	77	46	80	8,286	10,232	197
1974	197	9,940	216	10,353	77	42	70	8,010	9,901	452
1975	452	9,936	67	10,455	170	33	65	8,023	9,876	579
1976	579	10,335	76	10,990	178	37	63	8,244	10,357	633
1977	633	10,548	81	11,262	201	39	64	8,218	10,442	820
1978	820	10,458	95	11,373	287	47	66	8,231	10,654	719
1979 3/	719	10,626	102	11,447	235	49	70	8,312	10,805	642
1980 3/	642	11,057	96	11,795	313	48	68	8,279	11,003	792
Butter 4/										
1972	97	1,102	2	1,201	44	10	23	1,017	1,094	107
1973	107	919	56	1,082	4	13	9	999	1,025	7/ 57
1974	7/ 57	962	2	1,021	1	6	9	956	972	49
1975	49	984	2	1,035	1	2	9	1,012	1,024	11
1976	11	979	2	992	1	3	7	934	945	47
1977	47	1,086	2	1,135	2	2	5	941	950	185
1978	185	994	2	1,181	1	4	3	966	974	207
1979 3/	207	985	2	1,194	1	4	6	1,005	1,016	178
1980 3/	178	1,142	2	1,322	1	3	4	1,009	1,017	305
American cheese										
1972	242	1,652	15	1,909	4	17	5	1,614	1,640	269
1973	269	1,678	28	1,975	4	16	4	1,661	1,685	290
1974	290	1,862	112	2,264	5	24	3	1,811	1,843	421
1975	421	1,660	16	2,097	5	19	3	1,762	1,789	308
1976	308	2,049	14	2,371	6	16	4	1,933	1,959	412
1977	412	2,043	16	2,471	7	12	7	2,022	2,048	423
1978	423	2,074	18	2,515	4	12	9	2,111	2,136	379
1979 3/	379	2,188	18	2,585	5	15	21	2,137	2,178	407
1980 3/	407	2,354	18	2,779	5	14	14	2,154	2,187	592
Other cheese										
1972	65	952	164	1,181	3	6	5	1,105	1,119	62
1973	62	1,007	202	1,271	3	7	5	1,188	1,203	68
1974	68	1,075	204	1,347	3	4	7	1,260	1,274	73
1975	73	1,151	163	1,387	4	5	7	1,310	1,326	61
1976	61	1,272	193	1,526	3	10	3	1,443	1,459	67
1977	67	1,315	194	1,576	3	16	2	1,491	1,512	64
1978	64	1,445	224	1,733	6	22	2	1,625	1,655	78
1979 3/	78	1,528	230	1,836	7	20	3	1,700	1,730	106
1980 3/	106	1,591	213	1,910	8	20	2	1,781	1,811	99
Evaporated and condensed milk 5/										
1972	89	1,435	2	1,526	55	72	5	1,313	1,445	81
1973	81	1,338	3	1,422	43	58	4	1,248	1,353	69
1974	69	1,285	3	1,357	43	58	2	1,175	1,278	79
1975	79	1,218	1	1,298	54	64	2	1,119	1,239	59
1976	59	1,203	1	1,263	49	76	0	1,067	1,192	71
1977	71	1,039	1	1,111	34	62	1	939	1,036	75
1978	75	1,013	1	1,089	37	81	2	899	1,019	70
1979 3/	70	1,033	0	1,103	42	73	2	909	1,026	77
1980 3/	77	8/ 974	9/	8/ 1,051	43	71	3	8/ 882	8/ 999	52
Nonfat dry milk 6/										
1972	90	1,223	2	1,315	282	23	5	955	1,270	45
1973	45	917	267	1,229	18	19	1	1,113	1,154	75
1974	75	1,020	115	1,210	9	18	1	884	916	294
1975	294	1,001	2	1,297	113	6	1	703	828	469
1976	469	926	2	1,397	126	8	0	764	911	486
1977	486	1,107	2	1,595	156	8	0	729	917	678
1978	678	920	2	1,600	261	9	1	689	1,015	585
1979 3/	585	909	2	1,496	185	12	1	741	1,010	486
1980 3/	486	1,151	5	1,642	265	10	2	702	1,055	587

1/ To U.S. territories.
2/ Includes fed to animals or wasted where applicable.
3/ Preliminary.
4/ Includes butter equivalent of butteroil.
5/ Unskimmed includes both bulk and case goods.
6/ Human food only.
7/ Includes an estimated 10 million pounds of imported butter.
8/ Estimated.
9/ Less than 50,000 pounds.

Table 12--Stocks of dairy products, United States, end of year or month, 1969-80

Year and month	Commercial stocks					Government stocks				Total milk equivalent 3/
	Butter	American cheese	Other cheese	Canned milk	Nonfat dry milk	Butter 1/	American cheese 2/	Nonfat dry milk	Evaporated milk	
	Million pounds									
1969	25.1	264.4	52.1	106.9	83.9	63.6	1.1	137.8	42.9	5,245
1970	19.7	252.7	70.5	115.7	95.3	99.1	1.3	42.6	.1	5,803
1971	26.2	235.6	65.4	88.6	77.0	70.7	6.1	12.5	.2	5,104
1972	11.1	269.3	62.0	74.7	37.9	96.4	.2	6.9	5.8	5,498
1973	33.5	289.9	67.5	69.2	74.5	22.8	.4	.1	4/	5,207
1974	34.7	419.8	73.1	79.2	134.6	14.5	1.1	158.6	4/	5,886
1975	5.8	305.7	60.8	58.6	47.1	5.0	2.0	421.8	4/	3,844
1976	28.0	409.8	67.1	70.7	98.8	19.1	1.6	386.6	.1	5,708
1977	34.2	361.5	64.0	75.2	60.7	150.7	60.5	617.2	4/	8,626
1978	15.2	349.1	78.4	70.3	40.1	191.8	29.7	545.0	4/	8,730
1979	25.2	403.7	105.6	76.7	92.6	152.6	2.8	392.7	.3	8,599
1980	37.0	401.7	99.2	51.8	85.0	267.7	189.7	501.7	1.2	12,958
1979										
Mar.	32.1	359.7	85.6	49.6	50.5	177.9	8.1	472.8	---	8,689
June	55.2	428.9	97.3	117.1	128.3	204.9	3.3	410.0	.1	10,614
Sept.	54.1	454.0	94.4	129.2	96.0	166.4	2.9	453.6	.2	10,027
Dec.	25.2	403.7	105.6	76.7	92.6	152.6	2.8	392.7	.3	8,599
1980 5/										
Mar.	39.2	385.8	109.2	76.2	83.7	175.0	5.6	361.6	.3	9,238
June	42.1	431.1	111.9	115.8	137.4	247.2	59.1	410.1	.4	11,871
Sept.	44.1	402.3	114.1	119.6	76.2	260.8	163.5	523.2	.7	12,939
Dec.	37.0	401.7	99.2	51.8	85.0	267.7	189.7	501.7	1.2	12,958

1/ Includes butter equivalent of butteroil. 2/ Includes process cheese held by USDA. 3/ Includes manufactured products for which current monthly series are available (excludes nonfat dry milk). Excludes cream and bulk condensed milk. 4/ Less than 50,000 pounds. 5/ Preliminary.

Table 13--Dairy products removed from the commercial market by programs of the United States Department of Agriculture, 1955-80 1/

Year and month	Removals 2/					Solids content of removals			
	Butter 3/	American cheese 4/	Evaporated milk 5/	Nonfat dry milk 6/	Milk equivalent	Milkfat	Solids-not-fat	As a percentage of marketings: Milkfat	As a percentage of marketings: Solids-not-fat
	Million pounds							Percent	
1955	162.0	141.3	---	534.7	4,685	179.6	558.0	4.3	6.8
1956	164.6	186.5	---	723.4	5,206	197.6	753.0	4.7	8.7
1957	172.5	240.6	---	825.2	5,870	222.1	867.5	5.2	9.8
1958	183.7	75.0	---	886.0	4,658	178.2	875.0	4.2	9.8
1959	123.7	57.2	---	830.3	3,214	123.8	815.6	2.9	9.1
1960	144.8	.3	---	852.8	3,101	122.6	819.8	2.9	8.9
1961	329.4	100.0	---	1,085.6	8,019	305.0	1,075.3	6.9	11.2
1962	402.7	212.9	---	1,386.1	10,724	402.4	1,399.0	9.1	14.3
1963	307.5	110.9	---	1,219.2	7,745	291.8	1,210.1	6.7	12.4
1964	295.7	128.5	---	1,168.8	7,676	287.6	1,166.9	6.5	11.6
1965	241.0	48.6	---	1,098.4	5,665	217.4	1,074.0	5.0	10.8
1966	25.1	10.8	---	365.8	645	26.2	355.5	.6	3.7
1967	265.1	180.5	---	687.0	7,427	276.3	719.1	6.6	7.5
1968	194.8	87.5	54.9	557.8	5,159	193.2	575.4	4.7	6.0
1969	187.9	27.7	107.5	407.2	4,479	171.6	421.5	4.2	4.4
1970	246.4	48.9	48.4	451.6	5,774	221.1	460.7	5.3	4.8
1971	292.2	90.7	111.4	456.2	7/7,268	7/276.5	7/490.1	6.6	5.0
1972	233.7	30.4	97.0	345.0	7/5,345	7/208.4	7/362.0	4.9	3.6
1973	97.7	3.2	53.7	36.8	7/2,185	7/ 84.9	7/ 49.0	2.1	.5
1974	32.7	60.3	28.3	265.0	7/1,346	7/ 50.4	7/280.2	1.2	2.9
1975	63.4	68.2	24.5	394.5	2,036	77.7	405.6	1.9	4.2
1976	39.4	38.0	21.8	157.1	1,236	46.8	167.2	1.1	1.7
1977	221.8	148.2	15.9	461.7	6,080	230.8	494.9	5.3	4.8
1978	112.0	39.7	17.6	285.0	2,743	106.3	290.7	2.4	2.8
1979	81.6	40.2	16.4	255.3	2,119	81.7	261.8	1.8	2.5
1980 8/									
Jan.	26.7	18.0	1.3	34.9	732	27.6	39.6		
Feb.	10.4	22.1	1.2	32.1	435	15.8	38.0		
Mar.	4.0	22.6	.8	26.2	307	10.7	32.3		
Apr.	51.8	23.7	1.5	59.6	1,306	49.9	65.4		
May	60.8	37.7	1.2	89.7	1,630	61.8	98.7		
June	44.5	57.0	1.0	103.1	1,483	55.0	117.4		
July	11.6	62.0	2.4	96.2	857	30.2	112.2		
Aug.	-2.7	45.3	1.5	48.5	395	12.9	60.9		
Sept.	.7	19.2	1.0	33.9	206	7.1	38.7		
Oct.	16.5	8.8	2.1	38.3	432	16.6	40.1		
Nov.	15.0	12.4	1.2	32.6	436	16.4	35.5		
Dec.	17.8	21.1	2.3	39.3	581	21.6	44.9		
Total 9/	257.0	349.7	17.5	634.3	8,800	325.3	723.6	7.0	6.7

1/ 1949-54 data shown in DS-379, March 1980 Situation.
2/ Delivery basis, after unrestricted domestic sales.
3/ Includes butter equivalent of anhydrous milkfat, PIK, and purchases under Sec. 709, and 4a.
4/ Includes purchases under Sec. 709, and 4a.
5/ Includes purchases under 4a.
6/ Includes PIK certificates issues, and purchases under Sec. 709 and 4a.
7/ Includes dry whole milk purchases beginning November, 1971.
8/ Preliminary.
9/ Totals may not add due to rounding.

Dairy product stocks

Item	Feb. 1, 1979	Feb. 1, 1980	Feb. 1, 1981
	Million pounds		
Commercial:			
Butter	22.7	28.8	41.8
American cheese	355.5	397.7	427.5
Other cheese	83.7	111.8	97.0
Nonfat dry milk	37.0	85.5	80.9
Milkfat	165.4	193.3	206.8
Solids-not-fat	184.5	253.8	249.4
Milk equivalent	4,724	5,476	5,880
Government:			
Butter	184.0	162.4	286.6
American cheese	20.3	6.9	194.6
Nonfat dry milk	523.0	368.8	498.4
Milkfat	154.6	132.9	293.5
Solids-not-fat	509.3	356.9	539.6
Milk equivalent	4,000	3,422	7,843

(table 11). This small decline was due to lower fluid sales, as there was almost no change in butter and cheese consumption. The use of solids-not-fat was also down from 1979, decreasing by 1.3 percent.

Last year's per capita use of butter was unchanged at 4.6 pounds. Use of all types of natural cheese was up only slightly from 17.6 to 17.8 pounds. American cheese use was unchanged, while other-than-American use was up 0.3 pounds. This was counter to the steady upward trend in cheese consumption per capita—about 2/3 pounds annually over the past decade. Meanwhile, per capita consumption of nonfat dry milk was down 0.2 pounds.

Per capita use of all dairy products for 1981 will likely be somewhat above the lackluster performance of 1980.

Uncommitted CCC stocks

Item	March 1	
	1980	1981
	Million pounds	
Butter	165.3	367.1
American cheese	33.3	266.9
Nonfat dry milk	391.6	587.5

Per capita civilian consumption

Item	1978	1979	1980	1979-80 Change
		Pounds		*Percent*
Products:				
Butter	4.5	4.6	4.6	0
Cheese	17.2	17.6	17.8	+1.1
Cottage cheese	4.8	4.6	4.6	0
Ice cream	17.7	17.5	17.8	+1.7
Ice milk	7.9	7.5	7.2	-4.0
Nonfat dry milk	3.2	3.4	3.2	-5.9
Canned milk	4.2	4.2	4.0	-4.8
Fluid milk:				
Whole	161.3	155.6	147.7	-5.1
Lowfat and skim	91.5	94.7	97.9	+3.4
Cream and mixtures	5.6	5.6	5.7	+1.8
Milkfat	20.4	20.6	20.5	- .5
Milk solids-not-fat	38.0	38.0	37.5	-1.3

With substantially higher meat prices likely later this year and higher per capita income levels expected, dairy products should be in a more favorable position than was the case in 1980.

FOREIGN TRADE AND TRENDS

Imports of dairy products in 1980 totaled 2.1 billion pounds milk equivalent, down 8.6 percent from last year, and represented about 1.8 percent of total commercial use (table 14). Cheese imports accounted for about 90 percent of the imports, while other dairy products contributed the rest. On a product weight basis, quota cheese imports decreased 14 percent in 1980, while imports of all products were down 9 percent on a milk equivalent, fat-solids basis. Casein imports, which have been the subject of controversy, were virtually unchanged at 151 million pounds.

On a product-weight basis over 231 million pounds of cheese was imported during 1980, a decline of about 7 percent. Some of this decline occurred because importers increased purchases of cheese in December 1979 in anticipation of new quotas in 1980. Thus, December 1980 cheese imports were only 85 percent of those in 1979. However, most of the overall 1980 decline was likely because importers were faced with a slack demand for cheese and with high carrying charges.

Exports of U.S. dairy products increased to 892 million pounds milk equivalent during 1980, more than two times greater than 1979, with almost all the expansion in dried whole milk. Meanwhile shipments of dairy products to U.S. Territories during 1980 were down slightly from 1979.

World Milk Production

Cow's milk production for the world's 35 major dairy countries this year is expected to total only a little above 1980's output of 385.3 million metric tons. (People's Republic of China is not included.) Projected gains for the European Community (EC), United States, Brazil, and India may be largely offset by reduced milk production in Oceania (Australia and New Zealand), Poland, and the USSR.

Cow's milk production for France (the EC's largest producer) is projected to jump 3-4 percent for 1981. French dairy farmers are expected to react to a supplementary producer tax being imposed this spring by boosting milk output to maintain their incomes. The gain for the United States is based on a larger herd and increased produc-

Dairy product imports[1] (Quota and non-quota)

Year	Yearly quota[2]	Imports subject to quota	Imports not subject to quota	Total
		Million pounds		
1970	946	845	1,033	1,878
1971	973	776	580	1,356
1972	1,166	1,023	671	1,694
1973	3,608	3,263	596	3,859
1974	2,293	1,968	955	2,923
1975	1,306	976	693	1,669
1976	1,306	1,037	906	1,943
1977	1,306	1,119	849	1,968
1978	1,306	1,226	1,084	2,310
1979	1,306	1,233	1,072	2,305
1980	2,231	1,818	289	2,107

[1]Milk equivalent. [2]Includes temporary quotas authorized in 1973 and 1974.

U.S. dairy trade (milk equivalent)

Year and quarters	Imports		Exports	Shipments[1]
	Cheese	Other		
		Million pounds		
1979				
1st	251	133	98	150
2nd	432	44	90	167
3rd	517	34	74	143
4th	829	65	100	160
Year[2]	832	276	362	620
1980				
1st	224	142	108	135
2nd	321	35	88	139
3rd	489	18	291	142
4th	832	46	405	[3]105
Year[2]	1,866	241	892	N.A.

[1]To U.S. territories. [2]May not add due to rounding. [3]October-November. N.A. = not available.

tivity per cow. In Brazil, producer price adjustments during 1980 and early 1981 are expected to encourage additional milk production this year.

Australian milk output may be down some 6-8 percent in 1981 because of lingering effects of last year's drought and the continuing decline in cow numbers as farmers convert to more profitable enterprises. For New Zealand, more normal weather conditions are anticipated in 1981 following an exceptionally favorable year in 1980. This is expected to result in a 4-5 percent decline in New Zealand's milk output as production per cow slips. Poor 1980 feed crops hit Poland's dairy sector particularly hard resulting in sharp culling of dairy cattle last fall. The outlook is for a smaller herd in 1981 and a drop of 3-5 percent in Polish milk production. Projections point to a slight decline in the USSR's milk production this year. Although the Soviets have been able to maintain dairy herd numbers at levels higher than previously expected, serious feed problems have cut productivity, and unless pasture conditions turn favorable in the spring of 1981 milk output per cow will continue to fall off.

World Dairy Products

Worldwide butter production in 1981 may show little change from the 6.1 million metric tons manufactured last year. Consumption this year is expected to decline 1-2 percent. Therefore, aggregate stocks for the 35 countries may grow 5-6 percent during the year. EC butter output in 1980 totaled nearly 2.0 million tons, nearly unchanged from 1979. Exports were up sharply last year, including 70,000 tons of subsidized butter shipped to the USSR. Stable production and increased exports resulted in a 28 percent decline in EC butter stocks during 1980. With nearly half the world's butter stocks held by the EC, world stocks also showed a decline last year, even though U.S. production and stocks rose dramatically. The USSR's butter production in 1980 totaled 1.35 million tons, a 4-percent drop from a year earlier. A comparable decline in Soviet butter output is being projected for 1981.

Cheese production for the major dairying countries is projected to increase 2 to 3 percent in 1981 over the nearly 8.8-million-ton output last year. Production gains of around 5 percent are anticipated for the United States and 2-3 percent for the EC. Increasing red meat prices and higher consumer incomes are likely to strengthen demand for cheese in both the United States this year. Cheese consumption in the EC is expected to continue its upward trend in 1981.

Total output of nonfat dry milk (NFDM) will likely continue increasing in 1981 from the 4.2 million metric tons produced in 1980. A 2-3 percent gain is being projected for the 35 countries this year, with most of the increase coming from the United States, the EC, and Brazil. Small declines are being projected for the USSR, the Eastern European countries, and Japan. World stocks of NFDM at the end of 1980 were up more than 5 percent from a year earlier. Stocks of NFDM rose significantly in the United States, Mexico, and Brazil last year. Mexico, a major importer of NFDM, boosted purchases of the powdered milk sharply in 1980 and is expected to continue buying heavily in 1981. The EC reduced NFDM stocks last year. At the end of 1980 the EC held about one-third of world stock compared to nearly two-thirds during most of the 1970's.

Table 14 --Dairy Products: U.S. Imports, quota and non-quota, total 1979, and January-December, 1979-80 1/

Product	Calendar year quota	1979 imports	December			Cumulative, January-December		
			1979	1980	1980 as a % of 1979	1979	1980	1980 as a % of 1979
	Thousand pounds				Percent	Thousand pounds		Percent
Cheese, quota types								
American-Cheddar	12,205.3	6/ 10,257	3,565	1,513	42	6/ 10,257	10,710	104
-Other	7,545.4	6/ 7,707	4,147	3,390	82	6/ 7,707	7,367	96
Italian-Original loaves	12,374.4	6,695	996	551	55	6,695	5,998	90
-Other	1,550.0	997	90	14	16	997	1,059	106
Edam and Gouda-Natural	9,208.6	8,559	1,736	976	56	8,559	8,572	100
-Processed	3,151.3	1,283	110	408	371	1,283	2,019	157
Blue Mold	5,469.6	4,335	834	645	77	4,335	4,388	101
Swiss-Emmenthaler 2/	70,228.1	75,329	11,096	10,897	98	75,329	66,608	88
-Gruyere process 2/	15,597.2	18,642	3,149	1,816	58	18,642	14,060	75
Other-Over 0.5% fat 3/	90,192.1	88,626	20,357	17,995	88	88,626	67,370	76
-Under 0.5% fat 3/	12,621.1	4,869	2,858	2,462	86	4,869	7,194	148
Total	240,143.1	227,299	48,938	40,669	83	227,299	195,345	86
Cheese, non-quota types								
Other cow's milk cheeses 4/		---	---	1,486	---	---	12,200	---
Miscellaneous 5/		1,261	220	121	55	1,261	905	72
Pecorino		18,400	2,677	2,080	78	18,400	21,433	116
Roquefort		1,328	164	68	41	1,328	1,278	96
Total		20,989	3,061	3,756	123	20,989	35,816	171
Total cheese, Quota and Non-quota	240,143.1	248,289	51,999	44,425	85	248,289	231,161	93
Other quota products								
Butter	707.1	6/ 809	107	78	73	6/ 809	586	72
Butteroil	1,200.0	1,200	---	---	---	1,200	1,200	100
Butterfat mixtures	2,580.0	2,545	224	338	151	2,545	2,676	105
Ice cream	3,377.3	2,497	575	3	---	2,497	1,174	47
Frozen cream	12,540.0	12,315	---	824	---	12,315	9,849	80
Nonfat dry milk	1,807.0	6/ 2,178	104	---	---	6/ 2,178	6/ 4,890	225
Dried buttermilk and whey	496.0	317	157	80	51	317	498	157
Evaporated milk	1,312.0	1	---	---	---	1	1	100
Condensed milk	4,079.0	383	54	64	119	383	418	109
Chocolate crumb-Regular	21,409.0	11,651	561	1,106	197	11,651	14,480	124
-Lowfat	4,680.0	3,446	280	120	43	3,446	1,888	55
Animal feed with milk solids	16,300.0	15,695	752	48	6	15,695	14,487	92
Non-quota products								
Casein		150,827	13,839	14,540	105	150,827	151,226	100
Lactose		1,983	113	71	63	1,983	3,044	153
Milk equivalent, fat solids basis, total all products	2,231,498	2,304,681	425,124	368,107	87	2,304,681	2,106,843	91

1/ Preliminary.
2/ 1979 imports include Swiss-types which were not subject to quota prior to January 1, 1980.
3/ 1979 imports include cheeses which prior to Janaury 1, 1980 were not subject to quota.
4/ Primarily soft, ripened cheeses. No applicable comparison to prior years.
5/ Gjetost, Bryndza, Gammelost and Noekkelost, and Goya.
6/ Probable error in reported data.

Table 15.--U.S. Dairy Situation at a Glance

Item	Unit or base period	1979	1980							1981
		Jan.	Jan.	Feb.	Sept.	Oct.	Nov.	Dec.	Year	Jan.
Production and cow numbers:										
Total milk	Mil. lb.	9,960	10,307	9,970	10,364	10,455	10,076	10,491	128,425	10,739
Milk per cow	Lb.	923	957	926	955	963	927	965	11,875	988
Number of milk cows	Thou.	10,792	10,768	10,771	10,849	10,861	10,868	10,872	10,815	10,874
Prices received by farmers:										
All milk, sold to plants, 100 pounds	Dol.	11.90	12.80	12.80	13.20	13.70	14.00	14.10	13.04	14.10
Percentage of parity 1/	Pct.	75	71	71	70	70	71	72	72	69
Manufacturing grade milk, 100 pounds	Dol.	10.90	11.80	11.70	12.20	12.70	12.90	13.00	12.06	13.00
Parity equivalent	Dol.	13.31	15.31	15.49	16.37	16.46	16.63	16.63	16.00	17.53
Fat content	Pct.	3.84	3.81	3.75	3.64	3.77	3.83	3.83	3.68	3.79
Minnesota-Wisconsin (3.5% fat), 100 pounds	Dol.	10.55	11.37	11.35	12.07	12.42	12.52	12.61	11.88	12.64
Milk eligible for fluid market, 100 pounds	Dol.	12.00	13.00	13.00	13.40	13.90	14.20	14.30	13.22	14.30
Price ratios and dairy ration values:										
Milk-feed 2/	Lb.	1.62	1.54	1.57	1.39	1.42	1.40	1.38	1.48	1.39
Manufacturing grade milk-hog	Lb.	.21	.32	.32	.26	.27	.28	.30	.32	.32
Manufacturing grade milk-beef	Lb.	.18	.18	.18	.19	.21	.22	.22	.19	.22
Value of concentrate ration fed milk cows	Dol.	6.34	7.00	---	---	7.61	---	---	7.18	8.35
Farm cash receipts from dairy products	Mil. dol.	1,176	1,294	1,236	1,325	1,389	1,368	1,448	16,387	N.A.
Production of factory products:										
Butter	Mil. lb.	98.4	103.8	99.1	77.2	89.6	84.9	101.7	1,142.0	121.3
American cheese, whole milk	Mil. lb.	173.1	182.0	176.5	181.5	186.0	177.2	200.7	2,354.1	212.2
Cheese, other than American	Mil. lb.	119.5	128.5	121.3	133.5	142.1	137.8	144.6	1,591.4	131.7
Canned milk, unskimmed	Mil. lb.	59.1	59.8	58.3	56.2	50.4	51.5	60.3	725.0	55.7
Dry whole milk	Mil. lb.	7.1	8.0	6.1	6.2	8.2	7.9	6.8	84.1	6.8
Frozen products 3/	Mil. gal.	75.1	77.1	80.0	103.6	92.9	73.8	78.4	1,169.4	73.0
Creamed cottage cheese	Mil. lb.	67.7	67.1	68.5	70.7	69.1	59.1	58.5	828.0	63.4
Total whole milk equivalent 4/	Mil. lb.	5,300	5,606	5,488	5,398	5,601	5,127	5,912	71,269	6,219
Nonfat dry milk, human use	Mil. lb.	51.4	75.0	75.8	75.8	74.2	68.5	89.4	1,151.0	92.0
Wholesale prices:										
Butter, Grade A, Chicago, pound	Ct.	111.3	130.2	130.3	145.1	147.1	147.6	147.7	139.3	147.2
Cheese, American (40-pound blocks), f.o.b. Wisconsin assembling points, pound	Ct.	119.5	125.6	126.0	136.9	141.2	140.5	140.1	133.0	139.3
Evaporated milk, case	Dol.	17.01	19.05	19.17	20.01	20.41	20.68	20.70	19.85	21.15
Dry whole milk, pound	Ct.	98.2	105.7	105.9	113.2	114.1	117.5	118.1	110.8	118.6
Nonfat dry milk, pound	Ct.	76.4	83.9	83.9	89.7	92.2	93.6	93.9	88.7	93.8
Dairy products (BLS)	1967=100	203.5	221.0	220.8	233.7	238.4	240.6	242.7	230.7	245.2
Retail prices (BLS):										
Consumer price index 5/	1967=100	204.7	233.2	236.4	251.7	253.9	256.2	258.4	246.8	260.5
All food 5/	1967=100	199.2	243.8	244.9	261.1	262.4	264.5	266.4	254.6	268.6
All dairy products 5/	1967=100	177.7	218.4	219.5	230.6	232.7	235.4	238.0	227.4	240.1
Fluid milk and cream	12/77=100	111.8	123.2	123.7	128.0	129.1	130.4	131.9	127.0	133.0
Whole milk	1967=100	183.5	202.3	203.2	209.7	211.3	213.3	216.2	208.4	218.2
Other	12/77=100	112.1	122.1	122.7	127.7	129.1	130.5	131.4	126.3	132.1
Manufactured dairy products	12/77=100	112.7	123.8	124.5	133.6	134.9	136.9	138.2	130.6	139.6
Butter	1967=100	195.8	216.9	218.3	236.2	238.9	241.5	241.0	228.0	242.7
Cheese	12/77=100	112.9	123.5	124.2	132.3	133.4	135.9	137.0	129.5	138.2
Frozen desserts	12/77=100	111.8	124.0	124.6	135.7	138.0	139.1	141.4	132.8	143.6
Other	12/77=100	110.1	119.8	120.9	128.9	129.0	130.6	132.4	126.4	133.3
Margarine	1967=100	233.6	248.3	247.9	249.2	254.2	254.9	253.6	249.7	256.9
Stocks, end of month:										
Creamery butter	Mil. lb.	206.7	191.2	203.3	304.9	300.7	299.8	304.6	---	328.4
Cheese, total 6/	Mil. lb.	459.8	516.3	511.2	680.0	682.4	635.5	690.7	---	719.1
Canned milk, unskimmed	Mil. lb.	66.0	75.6	74.1	120.4	94.1	76.5	53.0	---	42.8
Dry whole milk	Mil. lb.	4.9	4.7	4.6	3.0	3.4	5.0	5.3	---	6.3
Total whole milk equivalent 7/	Mil. lb.	8,724	8,897	9,096	12,939	12,840	12,345	12,958	---	13,723
Nonfat dry milk	Mil. lb.	560.0	454.4	448.6	599.4	575.5	570.4	586.8	---	579.3
Commercial disappearance:										
Creamery butter	Mil. lb.	83.1	75.0	86.1	77.4	64.8	79.8	89.0	874.3	N.A.
Cheese, American	Mil. lb.	168.7	170.3	159.6	167.0	184.9	182.8	175.8	2,036.1	N.A.
Cheese, other than American	Mil. lb.	125.1	133.1	128.9	155.9	173.9	170.7	187.0	1,808.2	N.A.
Canned milk, unskimmed	Mil. lb.	62.1	60.0	58.5	67.3	74.6	68.2	81.9	732.8	N.A.
Milk in all products	Mil. lb.	9,473	9,488	9,454	10,251	10,040	10,128	10,089	119,248	N.A.
Nonfat dry milk	Mil. lb.	51.6	48.2	49.3	75.3	36.8	41.9	34.6	529.2	N.A.
USDA net removals:										
Butter	Mil. lb.	9.3	26.7	10.4	.7	16.5	15.0	17.8	257.0	51.6
Cheddar cheese	Mil. lb.	---	18.0	22.1	19.2	8.8	12.4	21.1	349.7	31.9
Nonfat dry milk	Mil. lb.	3.2	34.9	32.1	33.9	38.3	32.6	39.3	634.3	55.4
Evaporated milk	Mil. lb.	1.4	1.3	1.2	1.0	2.1	1.2	2.3	17.5	1.8
Total whole milk equivalent	Mil. lb.	194	732	435	206	432	436	581	8,800	1,385
Fluid sales, change from year earlier: 8/										
Whole milk	Pct.	-3.6	-5.3	-3.9	-4.2	-4.9	-4.9	-3.6	-4.1	N.A.
Low-fat and skim milk	Pct.	+5.1	+3.1	+4.0	+6.6	+5.7	+3.7	+4.6	+4.4	N.A.
Total fluid milk	Pct.	-.3	-2.0	-.6	+.3	-.7	-1.3	-.2	-.8	N.A.
Cream and cream mixtures	Pct.	+2.1	+3.3	+3.5	+1.3	+1.0	+1.0	N.A.	N.A.	N.A.

1/ Seasonally adjusted prices as percentage of parity price.
2/ Different series than formerly published.
3/ Ice cream, ice milk, and sherbet.
4/ Includes manufactured products for which current monthly series are available.
5/ For all urban consumers starting January 1978.
6/ Natural, plus process American cheese held by CCC.
7/ Excludes cream and bulk condensed milk.
8/ Daily average sales in Federal and State Marketing areas.
9/ Less than 50,000 pounds.
N.A. Not Available

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